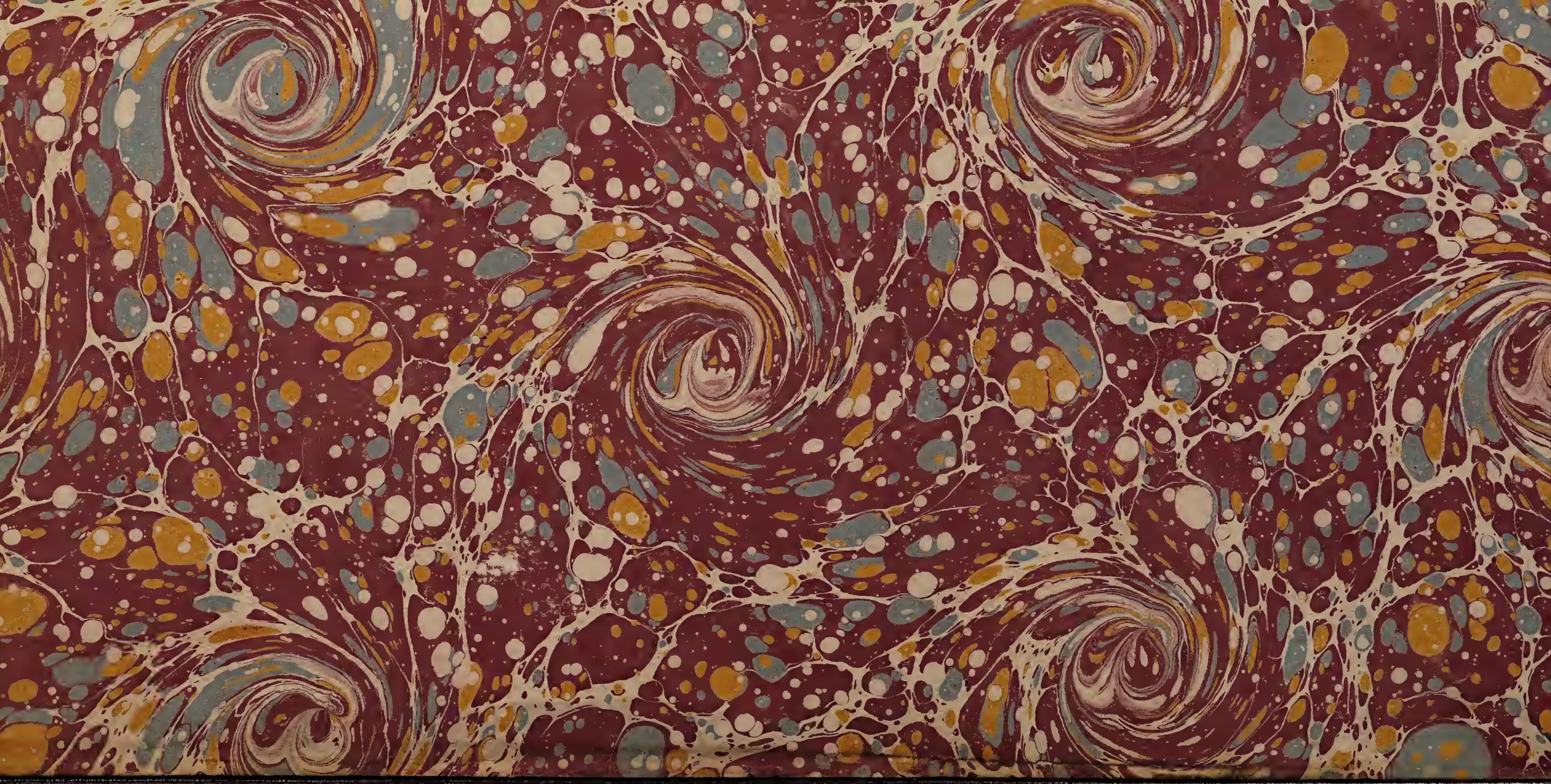

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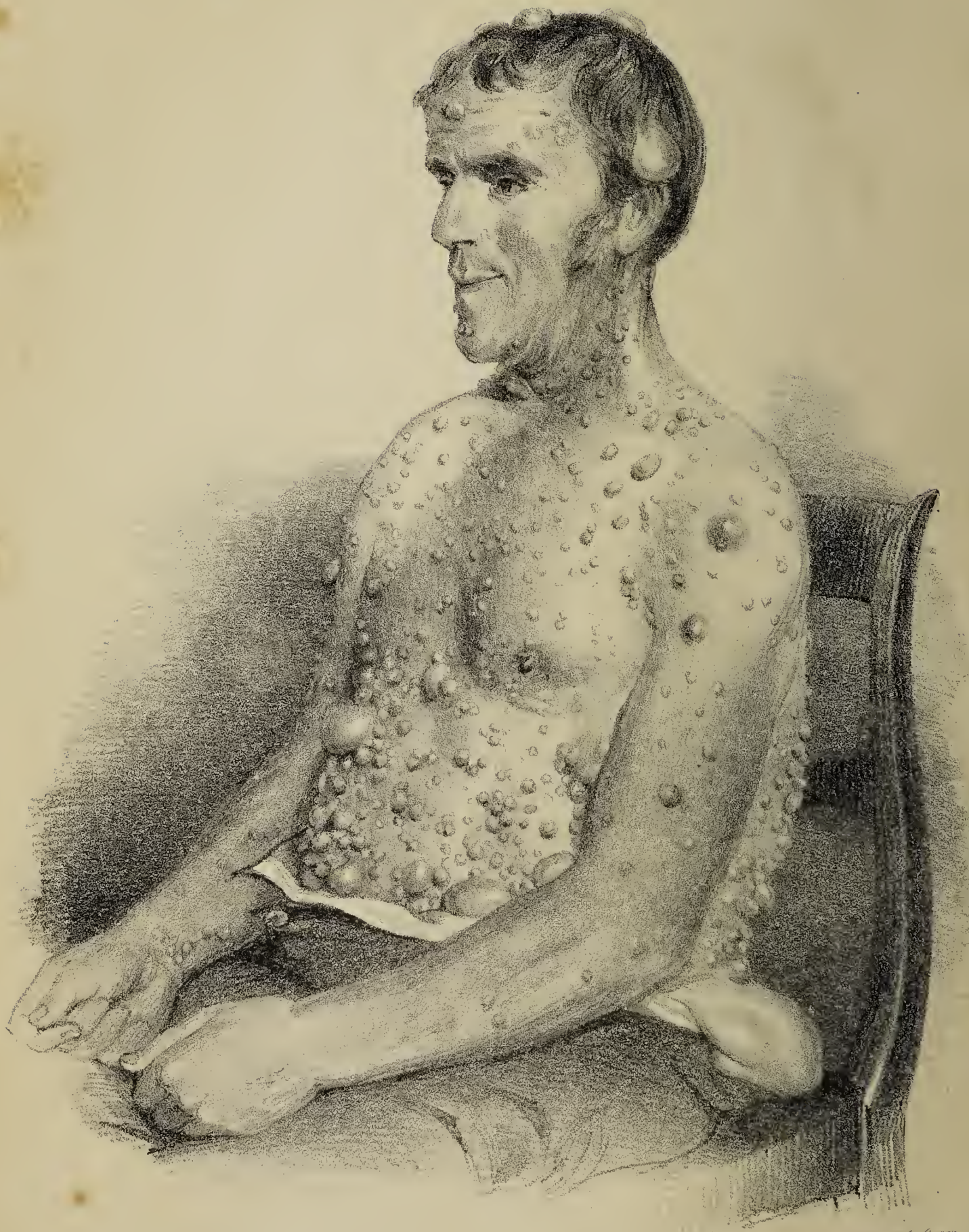

Day & Haghe Lith.rs to the Queen.

MR. FOWLER'S CASE OF MOLLUSCUM.

THE

TRANSACTIONS

OF THE

PROVINCIAL

MEDICAL AND SURGICAL

ASSOCIATION.

INSTITUTED 1832.

VOLUME VII.

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PROCEEDINGS

AT THE

SIXTH ANNIVERSARY MEETING

OF THE

PROVINCIAL

MEDICAL AND SURGICAL ASSOCIATION,

HELD AT BATH.

MEETING OF THE COUNCIL AT THE ROYAL LITERARY AND SCIENTIFIC INSTITUTION.

The business commenced on Wednesday, July the 18th, at twelve o'clock, and Dr. Boisragon, the President, was called to the Chair. The object of the meeting was principally to agree upon the Report to be submitted to the General Meeting, and to make the arrangements that were necessary for carrying on the proceedings.

After the Report of the Council had been agreed to, Dr. Hastings intimated that the following resolution had been sent to him by Mr. Wickham, which had been passed at the meeting of the Southern District Branch at Salisbury:—"That the Southern District Branch do earnestly request the Parent Society to reconsider the resolution passed last year, appointing *one-seventh* part of their subscriptions to the different branches, for

defraying their local expenses: that so indiscriminate a mode of allotment does not appear to be the most judicious, inasmuch as the expenses of the branches will bear no fixed proportion or necessary relation whatever to the number of their members: that should the branches be impeded in their proceedings by the want of necessary means, it is to be greatly apprehended that they will soon dissolve, or break off from the Parent Society; and that the Southern Branch has the less scruple in appealing for an increased allowance, being well assured, that even were the present allotment doubled, the Parent Society would still have been largely benefitted in a pecuniary point of view by the establishment of the Southern Branch, which has increased the Society's funds within this district more than tenfold."

A discussion ensued, in which the Council were unanimously of opinion that this request could not safely be granted, without danger of embarrassing the financial affairs of the Association, and therefore, although reluctant to do so, they were compelled to recommend the General Meeting to adhere to their former resolution.

Dr. Hastings said the next resolution related to the choice of a place of meeting for the next anniversary. There were several places to which the Association might go with advantage, and London had been named as highly eligible; but there was one place in particular which was pointed out to them, inasmuch as they had had a very pressing invitation from upwards of 100 members of the pro-

fession in that town: that place was Liverpool. If the solicitations from that town had not been so pressing, London would probably have been selected, in obedience to the expressed wishes of many of the members; but it would be a question for their future consideration whether the metropolis should be the place of their meeting in the following year.

The following are the names of the gentlemen whose signatures were attached to the invitation forwarded from Liverpool:—J. P. Brandreth, M.D.; T. H. Banning, M.D.; J. Rutter, M.D.; James Dawson, Esq.; P. W. Scott, M.D.; J. Bevan, Esq.; D. Macrorie, M.D.; J. S. Carsil, Esq.; Hugh Neill, Esq.; Alexander Hannay, M.D.; George Rogerson, Esq.; W. L. Cocks, Esq.; Francis Archer, Esq.; Charles Worthington, Esq.; P. J. Murphy, M.D.; William Reynolds, M.D.; Samuel Bromilow, Esq.; John J. Timmons, Esq.; R. Ellison, Esq.; R. Bickersteth, Esq.; H. Sorley, M.D.; Thos. Jeffreys, M.D.; David Baird, M.D.; John O'Donnell, M.D.; James C. Fergusson, Esq.; William Turner, Esq.; Henry Anderton, Esq.; J. S. Godfrey, Esq.; John Burrows, Esq.; Hensman and Son; Arch. Robertson, M.D.; John Callan and Son; Richard Forshaw, Esq.; Thomas W. Cattell, Esq.; William Gill, Esq.; Thomas Eden, Esq.; James Carson, senior, M.D.; C. B. Greatrex, Esq.; Edward Batty, Esq.; Thomas Simon, Esq; J. Bennil, Esq.; J. Canty, Esq.; Alexander Hookes, Esq.; E. Staller, Esq.; G. Johnstone, Esq.; D. Rose, Esq.; J. Poole, Esq.; John Shaw, Esq.; H. V. Martin, Esq.; F. Wilson,

Esq.; Henry Bradshaw, Esq.; A. Gillon, Esq.; John Ashcroft, Esq.; D. Cohen, M.D.; W. H. Lynass, Esq.; Robert Hector, Esq.; B. Nightingale, Esq.; J. Hughes, Esq.; John Flayde, Esq.; John Blackburn, Esq.; Richard Kay, Esq.; J. Lackwood, Esq.; Charles Boyce, M.D.; John Nicol, M.D.; John Moore, Esq.; S. Mc Cullock, Esq.; James Carson, junior, M.B.; P. Ramsay, M.D.; T. O. Dobson, Esq.; John Sutherland, M.D.; Ellis Jones, Esq.; W. T. Callon, Esq.; Edward Bradley, Esq.; Thomas Gouthwaite, M.D.; D. Chalmers, Esq.; James Long, Esq.; Joseph Dickinson, M.B.; John Corlet, Esq.; D. H. Mc Nicoll, Esq.; Chalmer and Son, Esqrs.; James Craig, Esq; George C. Watson, Esq.; Thomas Pennington, Esq.; John Checsbrough, Esq; R. P. Tucker, Esq.; Henry Reston, Esq.; Robert Hamilton, Esq.; James Nottage, Esq.; David James, M.D.; Thomas Lentas, Esq.; Henry Emitt, Esq.; James Munn, Esq.; John Shaw, Esq.; J. R. W. Vase, M.D.; William Craig, Esq.; W. P. Thomas, Esq.; J. D. Mackenzie, M.D.; Samuel Malins, M.D.; J. Moffall, Esq.; J. H. Davis, Esq.

It was then unanimously determined to recommend Liverpool to the General Meeting as the town in which the Anniversary should be held for the year 1839.

GENERAL MEETING AT THE LECTURE ROOM OF THE BATH LITERARY INSTITUTION.

Shortly after seven o'clock on Wednesday evening, the General Meeting of the members took place at the Lecture Room of the Bath Literary Institution,

at which a very considerable number of medical gentlemen attended, among whom were the following:— — Addington, Esq., Ashley Court, near Bristol; Dr. Ainsworth, Manchester; Dr. T. J. Aitkin, Poole; Dr. Alexander, Chippenham; R. H. Alexander, Esq., Corsham; W. F. Bally, Esq., Bath; Dr. Barlow, Bath; R. Barnett, Esq., Stourport; J. Barrett, Esq., Sherborne; Dr. Barry, Torquay; Dr. Bealey, Bath; Dr. Begley, Hanwell; James Bisdee, Esq., West Town; Dr. Blackmore, Bath; Dr. Boisragon, Cheltenham; Dr. Boisragon, jun., Cheltenham; Dr. Bompas, Fishponds; W. Brown, Esq., Bath; S. Bryant, Esq., Bristol; S. Bullen, Esq., Wells; Dr. Burne, London; J. B. Burroughs, Esq., Clifton; W. Bush, Esq., Bath; H. Cartwright, Esq., Torquay; W. Church, Esq., Bath; H. Coles, Esq., Cheltenham; W. Colborne, Esq., Chippenham; R. Collins, Esq., Chew Magna; Dr. Conolly, Cheltenham; Dr. Conolly, Birmingham; Dr. Cowan, Reading; James Craig, Esq., Timsbury; J. G. Crosse, Esq., Norwich; W. Dalton, Esq., Winchcomb; Dr. Daniell, Bath; J. Darke, Esq, Berkeley; Dr. Davis, Bristol; A. Davis, Esq., Rushall; A. T. S. Dodd, Esq., Chichester; — Drake, Esq., Wells; Dr. G. W. Dyke, Devizes; C. Edwards, Esq., Batheaston; J. B. Estlin, Esq., Bristol; — Evans, Esq., Bristol; A. Eves, Esq., Cheltenham; R. Falkner, Esq., Bath; Dr. Feild, Worcester; — Field, Esq., Bath; F. Flower, Esq., Chilcompton; Dr. Forbes, Chichester; Dr. H. H. Fox, Bristol; Drs. F. and C. Fox, Brislington House; J. Fox, Esq., Cerne Abbey; G. D. Fripp, Esq., Bristol; G. T. George, Esq., Southampton; J. L. Gibbs,

Esq., Westbury; T. Green, Esq., Bristol; Dr. Gregory, London; Dr. Grove, Salisbury; R. T. Gore, Esq., Bath; R. Godfrey, Esq., Bath; S. Hare, Esq., Leeds; Dr. Harman, Bath; Dr. Hastings, Worcester; G. E. Hay, Esq., Bath; M. P. Hayward, Esq., Stonehouse; C. H. Hebb, Esq., Worcester; George H. Hetling, Esq., Bristol; Dr. Heywood, Blandford; — Hiscox, Esq, Bath; Dr. Holme, Manchester; C. Hooper, Esq., Kempsey; Dr. Howell, Swansea; — Hudson, Esq., Wells; W. Hutchins, Esq., Keynsham; Dr. Jeffreys, Liverpool; Dr. J. P. Johnson, Shrewsbury; J. Jordan, Esq., Manchester; Dr. Wm. Kay, Clifton; J. Kilvert, Esq., Bath; G. Kenrick, Esq., Melksham; Dr. Kidd, Oxford; G. Kitson, Esq., Bath; J. M. Knapp, Esq., Bath; W. Leach, Esq., Chilcompton; C. Lingen, Esq., Hereford; Dr. Lowder, Bath; Dr. Macartney, Dublin; Dr. Macmullen, Wells; Dr. Malden, Worcester; P. Marriott, Esq., Bath; P. Marshall, Esq., Shepton Mallet; T. Martin, Esq., Reigate; George May, Esq., Reading; J. Meears, Esq., Worcester; W. F. Morgan, Esq., Bristol; — Morgan, Esq., Corsham; Wm. Mortimer, Esq., Clifton; — Newman, Esq.. Mere; G. Norman, Esq., Bath; — Palmer, Esq., Bath; G. Partridge, Esq., London; W. Perry, Esq., Bathford; C. Pope, Esq., Temple Cloud; Dr. Ring, Reading; T. Roblyn, Esq., Clifton; Dr. W. Sainsbury, Corsham; Dr. T. Salter, Poole; G. Sampson, Esq., Salisbury; T. Sawer, Esq., Exeter; Dr. Shapter, Exeter; Dr. Shute, Gloucester; — Skinner, Esq., Bath; C. Smerdon, Esq., Clifton; N. Smith, Esq., Bristol; J. S. Soden, Esq, Bath; John Soden, Esq., Bath;

J. C. Spender, Esq., Bath ; G. Spry, Esq., Bath ; T. Stockwell, Esq., Bath ; — Stowe, Esq., Bath ; Dr. Streeten, Worcester ; T. L. Surrage, Esq., Clifton ; Dr. Symonds, Bristol ; — Taylor, Esq., Cricklade ; Wm. Tudor, Esq., Bath ; Thos. Taunton, Esq., Worcester ; Dr. Wallis, Bristol ; — Washbourne, Esq , Corsham ; Dr. James Watson, Bath ; Dr. C. J. B. Williams, London ; J. W. Wilton, Esq., Gloucester ; J. Woodcock, Esq., Bury ; — Woodland, Esq., Bridgwater ; G. L. Wood, Esq., Bath ; H. Woods, Esq., Bath ; J. C. Yeatman, Esq., Froome, &c., &c., &c.

On the motion of Dr. Hastings, Dr. Boisragon took the chair, and immediately proceeded to address the members on the occasion of his vacating the Presidency as follows :—

" Gentlemen of the Provincial Medical and Surgical Association,—Surrounded as I now am by so numerous a body of our learned and intellectual profession ; addressing from this chair, to which you did me the high and distinguished honour of electing me at our former meeting, and which I am now on the point of vacating for ever, the *élite* of my professional brethren, scattered through the provinces of this empire, I feel that I should ill discharge my duty to all, and disappoint the expectations of many, were I to resign the important and honourable office of President and to retire into the ranks from which your gratifying, though perhaps too partial, suffrages drew me forth, without briefly announcing to this learned auditory some of the important topics more intimately connected with

the future interests and ulterior success of this your rapidly rising and *nationally* influential Association during the past year. Gentlemen, the untiring, though multiplied labours of your Secretaries and Council; the ardent and intellectual character of your Founder, to whose original and well-directed efforts we are indebted for our useful existence, and who unites to the splendid achievement of creating a moral power hitherto unknown to this country in medical science, the beneficial yet unassuming merit of conducting its laborious details; the energy and talent of the contributors among yourselves to your various and judicious arrangements as depositories of scientific facts and statistical relations; in a word, all that the enlightened acuteness through the executive organization of your Body could suggest for the furtherance and improvement of your grand designs, have been carefully and diligently considered during the period that has elapsed since I had the honour of opening the last meeting at Cheltenham, and of appearing before you in this chair, to which an able individual of your number, with pretensions to that distinction far superior to any to which I can aspire, is for your advantage and reputation about to succeed me. It would be not less injudicious than indelicate to attempt on this occasion any anticipation of what falls properly within the functions of your President elect, or of trenching on that ground which will no doubt be so ably cultivated when my learned successor addresses you from this chair; but it may not, I trust, be considered as irrelevant or uninteresting, while returning you my ardent thanks for

the confidence reposed in me during the past year, to give you some brief account of my stewardship in the present, more especially as during the interval of the last and present meeting, a circumstance of very paramount importance to the present dignity and future interests of your Association has taken place, calculated, in the opinion of my official colleagues and myself, to advance in no common degree the influential character of this body, and to give it (though properly without a "*local* habitation") a "*name*" which will stamp the Provincial Medical and Surgical Association of Great Britain among the highest of those learned and scientific bodies whose proud design is to unite the cultivation of a noble philanthropy with the assiduous prosecution of philosophical truth. To be distinguished among our fellow men—to deserve the approbation of the wise and good—and to secure that of the mass with whom we must necessarily come in contact, by the moral power as well as by the physical improvements of this age of discovery, belongs to the higher and grander objects of your Association; and it is a proud consideration to announce that the era of our importance and value as a national organ for the extension and support of medical science, has already commenced, and that, in conformity with your resolution at the last meeting, your dutiful and loyal address to our gracious and youthful Queen was presented, and graciously received by her Majesty, through the flattering introduction to her royal presence of her first Minister of State. The next, perhaps the most pleasing communication it is my duty to deliver, is that of the gratifying,

indeed the flattering reception of your Deputation by the highest in rank and most influential in character and talent among the leading members of our profession in the Metropolis. My distinguished and learned colleagues who accompanied and graced my humble pretensions with their support, received from one of the brightest ornaments of surgical science—need I mention the name of Sir Astley Cooper?—a reception which, for liberal and splendid hospitality, could not be exceeded; imparting honour and consequence to your body through your accredited representatives, by drawing around his table for the occasion a great portion of the *élite* of metropolitan celebrity, who vied with "our host" in doing honour to an Association which will soon connect, by links of courtesy and kind feeling, the best interests of the profession at large, and unite the provinces with the metropolis in a common bond of union, alike important to its own dignity and the best interests of the Society itself. Should it therefore, Gentlemen, fall within the scope or intention of your Council to make the metropolis, at either an earlier or later period, the focus of your annual meeting; should your "local habitation" at any time be pitched in that mighty arena of talent and science, your names shall have honourably preceded you; and I think I shall be supported by my able and learned colleagues in assuring you that you will be received by our metropolitan brethren, of the highest distinction, with a friendliness and good will, arising from the importance to society and to the profession at large of the cause that unites you, as well as with a courteous liberality, that will not

only render a visit to London a duty to ourselves, but will also constitute a delightful re-union with those medical chiefs, most of whom we may have known in our earlier years, and who will themselves thus learn how best to appreciate provincial talent, through an equally solid, though perhaps less brilliant celebrity. I have now, Gentlemen, only to announce, in my concluding remarks, that I have had the honour of officially signing, through our valued and indefatigable Secretary, Dr. Hastings, your spirited and judicious petition to the legislature against the degrading and, some of them, iniquitous clauses in the Poor Law Bill, which will be presented to the House of Commons by Mr. Sergeant Talfourd, and which cannot fail, we must hope, in tending at least to open the eyes of its narrow-minded concocters, whose degraded enactments against some of the first interests of humanity involve equally the safe and judicious treatment of the sick poor with the dignity and just remuneration of a liberal and arduous profession. My grateful task, Gentlemen, imperfectly as I feel it has been performed, is now over: my official duties verge at this moment in the person of my able and accomplished successor; bnt I cannot retire from before you without endeavouring to convey, *ab imo pectore*, my zealous though still feeble expressions of its sincerity in your cause, and to assure you that those efforts for your increasing success, which you have in so flattering a manner honoured, through your nomination of me as President, shall be continued with undiminished assiduity as a private member of your noble Association. In present-

ing, Gentlemen, your new President, I have only to mention the name of Barlow to secure your confidence and highest approbation; a name long associated with all that can command respect in our liberal and enlightened profession; a name that has distinguished itself in various departments of sound investigation and medical philosophy, and upon which the worthy owner will, in your Presidential chair, confer no less honour than he received from it by that devotion to your interests which his character and reputation warrant me in attaching to his name. Gentlemen, farewell."

Dr. Barlow, on taking the chair as President for the ensuing year, addressed the members to the following effect:—

ADDRESS OF THE PRESIDENT.

"Gentlemen,—In entering on the office which your kindness has assigned to me, my first agreeable duty is to bid you all heartily welcome to this our ancient city, which was never more signally honoured than it is on the present occasion. Cultivated talent and moral worth, especially when combined, must ever receive the respect and regard of all who are capable of appreciating them. For both, our revered profession has ever been eminent; and when they who, even among its members, distinguish themselves by pressing forward in the career of humane and enlightened endeavour, assemble in such numbers as I rejoice to see now around me, for the purpose of cultivating still further their divine art, and

promoting the best interests of humanity, their presence must confer honour on any place which is graced by such an assemblage. It is not my design, Gentlemen, to trespass long on your time or attention, in the address from the chair, with which the customs of our Association require me to open the present session. To do so would be an abuse of the privilege which my present situation confers, and prove only an irksome delay of the far more interesting matter which will be speedily submitted to your consideration. In each successive year some change takes place in the circumstances under which your President addresses you. Heretofore, and until the designs for which the Association was instituted, had become generally understood, it was the duty of your Presidents, in their respective discourses, to dwell on those designs and the evidences of their fulfilment, so as to make the nature, scope, tendency, and progressive realisation, familiar to all concerned. Happily this is no longer needed; for the years that have elapsed since we first assembled to found this Association, and the wide diffusion of our *Reports* and *Transactions* have made these designs fully known; while the extension of the Association, which in respect both of numbers and space, has advanced with a rapidity which I may say is unexampled, furnishes assurance the most unequivocal of their being justly appreciated. Were further proof of this needed, the assemblage which I now see before me, congregated from almost every part of the kingdom, must suffice to carry conviction to the most sceptical. And here, Gentlemen, I will remark, that so long as we display such evidence of

zealous and harmonious co-operation, we may be content to pursue the direct and even tenour of our way, whatever the opposition we may chance to encounter; and, cheered by the consciousness that, so far as our abilities extend, we are pursuing laudable objects from pure motives, may safely disregard objections, such as only ignorance or misconception of our designs could urge against us. Practical details and statistical elucidations you will have abundantly in the ulterior proceedings of the present meeting; on all such it would be vain and idle for me to dwell. I prefer, therefore, during the few moments to which my present address shall be limited, to direct your attention to those considerations which admit not of statistical exposition, yet which are not the less valuable from requiring to be addressed rather to the mind's eye than to our actual perceptions. The main objects for which we are associated, as stated in our fundamental constitution, are, the advancement of medical science, and the maintenance of the honour and respectability of the profession. These objects are intimately connected; for unless science be diligently and effectively cultivated, the honour and respectability of the profession would rest on a very slight foundation; and unless the honour and respectability of the profession were otherwise maintained, on the high ground of moral integrity and liberal sentiment, no advance in science could vindicate its claim to that high estimation in which it has through ages been held, and which, I trust, it will ever even with sensitive jealousy preserve. The feelings of the sensitive Roman, who would not that his wife should be

even suspected of error, are to be commended; and with similar feelings it should be our care so to conduct the proceedings of our Association, that not even the suspicion of selfish or sinister designs should attach to us. To the cultivation of medical science our endeavours have been hitherto directed, with an earnestness and steadiness of which it becomes not me here to speak. However little these endeavours may have hitherto produced, they have at least been exerted with a zeal worthy of the cause which called them forth. My present purpose however is not to dilate on these efforts or their fruits, but to impress on you all that they who would judge of the value of our Association, even by the efforts already made, or the products which have resulted from them, would form but a very imperfect estimate of the benefits which our Association is conferring, and which it cannot fail eventually to realise. It has been asked, and in a depreciating tone and unfriendly spirit, what have we done? The very question conveys to me the conviction that the party proposing it has no adequate conception of the subject on which he affects to seek information. No one really imbued with the love of science or the spirit of truth, would even form the conception of judging us by so crude and inadequate a test. It is, no doubt, true that fruits should be the proofs by which modes of cultivation should be judged; but surely not till time be given for seeds to germinate and plants to fructify. In our cultivation of medical science, it surely cannot be barren of fruits when upwards of one thousand energetic members of a liberal and enlightened

profession are incited by the inspiriting stimulus which this Association supplies, to exert their best faculties and most earnest efforts for investigating those truths of nature which it has ever been the object and aim of our profession to explore. In the activity thus aroused, there is an ample assurance that the energies so called forth will not be unprofitable; that to the seed thus sown may we look with full confidence for a rich and abundant harvest. I care not, Gentlemen, how slowly this harvest advances; it being enough to satisfy me that it is advancing. I am not impatient for brilliant discoveries, such as the history of science has shewn to occur only at intervals few and far between. Science is ever of slow advance, if this is to be judged by the sudden bounds by which consummate genius starts a-head of contemporary talent, marking epochs in the history of the science. But it is ever steadily progressive, if we note the slow, but sure, the humble, unpretending, but diligent and unwearied labour with which its ordinary votaries endeavour to extend it. Among these humble labourers do we class ourselves; with the merit attaching to such labour we will be content, and on the result of such labour are we satisfied to rely. Should it fall within the inscrutable designs of Providence that some master-mind should spring up among us, some heaven-born genius destined to achieve the performances and equal the eminence of a Newton or a Harvey, we shall gratefully hail the distinction, assuming only the humble merit of having used our best endeavour to incite and cherish such transcendent talent. But, Gentlemen, in the ordinary pursuit

of our objects we look not for such results, and on the diligent exercise of ordinary talents are we content to rest our claims for commendation, encouragement and support. I am led to submit these views to you, Gentlemen, believing them to be those of truth and sober reason; for while I would deprecate all extravagant anticipations and vain boastings, I conceive it essential to the steady progress of our combined exertions, that we neither undervalue what we have done, nor form an incorrect estimate of what our conjoined labours are capable of effecting. On the second head of my present address, that, namely, which relates to the maintenance of the honour and respectability of the profession, I shall be very brief; for this honour and respectability must ever flow, not from self-elating pretensions or arrogant claims to consideration, but from the professional skill and moral worth of the individual members. As the aggregate of parts constitutes the whole, so must the maintenance of honour and respectability by each individual member of our Association ensure beyond the possibility of failure, the continuance of these long enjoyed attributes to the collective body; and when I consider the high moral qualities which the members of our body on all occasions display, the talents they evince, and the zeal they manifest, to all of which even the brief records of our Association already bear ample testimony, I can entertain no fears of our ever, as a profession, descending from that high moral eminence, on which the opinions of the world, and the express declaration of several of the sagest and most acute observers of human nature, have for ages

placed us. On the conduct of our individual members I confidently rely for preserving unsullied that reputation which the profession has hitherto maintained. I would here only impress one caution respecting those measures in which we may in our corporate capacity be called on to engage. Corporate proceedings are subject to the same laws, and are to be tried by the same test as individual conduct. All flow from motives more or less elevated or debased; and where the higher motives can be brought to bear on any point, those of a lower class should never be suffered to prevail. The human mind is endued with various faculties, all suited to this our transient and probationary state of existence. We have various animal incitements to urge us to whatever is necessary for the continuance and enjoyment of life; but we have also moral faculties to control the lower propensities, and judge those actions to which our animal nature may impel us. It too often happens that the dictates of the animal propensities assume the garb and exercise the authority of the moral sentiments, thus misleading into error many who, under the delusion, are scarcely conscious of doing wrong. But an honest scrutiny of motives, an ingenuous reference of each of these to the moral or animal feeling in which it originates, can never fail to detect the deception, and guide into the right path all who desire to pursue it. These comments would here be impertinent but that they serve to indicate the criterion by which each corporate act of our Association should invariably be judged. Whenever the act is such as all the higher moral feelings of our nature

clearly sanction and approve, let us fearlessly perform it, regardless of all that imperfect conception or timidity may urge against it. On the contrary, whenever an animal or selfish impulse can be traced among the influencing motives, however slight the degree in which this may be intermingled, let us ever pause until we depurate the moral motives from the dregs which vitiate them, and restore the higher sentiments to that supremacy with which the Creator has endowed them. I have assimilated corporate acts to individual in the motives which incite them, and the tests by which they are to be tried. But there is one difference which deserves to be noticed as important in our present view of the subject. Corporate acts are less redeemable than individual, and therefore require to be still more carefully guarded from error. Hitherto we have been guarded in our corporate measures, and to ensure a continuance of the same circumspection is the end to which the few remarks which I have now offered are directed. With these I now conclude my present trespass on your time and patience, respectfully yet earnestly exhorting the several members of our excellent Association to apply the energies of their own minds to both the important topics to which I have referred. It will gratify me if what I have ventured thus cursorily to submit to them shall, on deliberate reflection, receive the sanction of their own judgments; and still more if to the sentiments to which I have given utterance their own feelings shall be found to respond. So far as my judgment and feelings are capable of guiding me I would say,—In cultivating medical

science disdain not, through vain aspirations for profound theories or dazzling generalizations, that patient observation of nature and diligent collection of accurate facts, from which all true theory must be derived, all sound generalization deduced ; and, in upholding the honour and respectability of the profession, let the measures we collectively sanction ever bear the impress of that high-toned moral feeling which has so long distinguished our profession, and by which its true interests require us ever to abide."

Dr. Hastings then read the Report of the Council, which was as follows :—

REPORT OF THE COUNCIL OF THE PROVINCIAL MEDICAL AND SURGICAL ASSOCIATION, FOR THE YEAR 1837–8.

The steady progress of the affairs of this Association from the period of its institution, six years ago, to the present time, serves most undeniably to evince that its founders made a correct estimate of the existing desire among the cultivators of medical science residing in the English provinces to combine together, so as to make their labours more instrumental than they had formerly been in the advancement of the healing art. Each revolving year has increased the number of its members (which now amount to one thousand and eighty), while the influence that has arisen from this additional strength, has been directed to the accomplishment of the important objects which were, at the commencement of the undertaking, specified as most worthy of regard.

The review of the period which has elapsed since the last Anniversary Meeting gives encouragement to the hope that each returning year may afford fresh demonstration of the advantages that may result from the continuance of an Association which has in view the promotion of harmony and good feeling among its members, and the collection and diffusion of facts which may serve to render medical science more signally beneficial to mankind.

DISTRICT BRANCHES.

The Council are happy to record that they believe the system which was sanctioned at the last Anniversary Meeting, of dividing the Association into District Branches, is likely to be attended with very favourable results, by adding to the number of its members, and by facilitating the scientific and social intercourse which it is the great object of this Association to promote. Since the last Anniversary, two District Branches have been added to those which were then in existence, viz., one at Newton, in Lancashire, called the Newton Branch, comprehending members residing at Manchester, Liverpool, Warrington, and several towns in the North of England; the other at Shrewsbury, called the Shropshire and North Wales District Branch. There are now, therefore, six Branches,—the Eastern, the Wells, the Southern, the Bath, the Newton, and the Shropshire Branch of the Provincial Medical Association. Each of these Branches has, in compliance with the laws passed last year, submitted the regulations by which it is governed

to the Central Council of the Association. In these regulations there is nothing which calls for any comment, as they are formed on the basis of the resolutions agreed upon by the Cheltenham Meeting, and have consequently been confirmed It may, however, be right to remark that the associates in the Newton Branch have declined receiving the allowance of one-seventh part of the amount of their subscriptions to defray the expenses of the District Branch, as they prefer meeting this expenditure by an additional contribution among themselves.

FINANCES.

The state of the finances will ever require the vigilant attention of your Council, as much of the usefulness of the Society would be diminished if its pecuniary affairs did not flourish. It is, therefore, very satisfactory to discover at the end of a year, during which the demands upon the funds have been greater than before, that the income has been so far increased, that a larger balance than on the last occasion of our assembling together, is in the hands of the Treasurers.

	£.	s.	d.
The income is	1249	17	1
The expenditure is	825	1	3
The balance is	£424	15	10

It may not be irrelevant here to point out to those members who have not sent in their subscriptions, that they can at any time do so, without much trouble, by paying the amount to their own bankers,

and desiring that it may be remitted to Messrs. Robarts and Co., London, for Messrs. Berwick and Co., Worcester, on account of the Provincial Medical and Surgical Association. A punctual attention to this regulation by the members who have not an opportunity of paying their subscriptions through other channels, would considerably increase the resourses of the Association, and consequently contribute to its general efficiency.

TRANSACTIONS.

The superintendence of the publication of the *Transactions* has anxiously engaged the attention of the Council, and the contributions of the members have enabled them to publish the sixth volume. It is gratifying to observe the progress the Association is making in laying before the public the Medical Topography of England; the memoirs on Exeter and Cheltenham abound in interesting medical and statistical details, which, if followed up by similar descriptions throughout the kingdom at large, cannot fail to be productive of much benefit. The Council also congratulate the members that the replies to the inquiries respecting the epidemic influenza contained considerable information from persons residing in different parts of the kingdom, and have thus enabled the authors of the report on that subject to publish a communication of very great value. The result of this inquiry is very satisfactory, as it shows that in all future epidemics a similar plan may with propriety be adopted; and it has encouraged the Council to issue queries

of a similar nature respecting small-pox, and the protecting influence of vaccination. It has been suggested, also, that were members generally to communicate the results of their experience in the management of certain diseases upon which there exists at present considerable difference of opinion, valuable information might be expected to accrue. Cases which, taken separately, are of little value in the establishment of correct views, either of pathology or practice, when arranged and compared with those already recorded, would thus possess great interest, and lead to important results. The Council are, therefore, disposed to urge members to forward notices or complete histories of any such cases as may occur in their practice, with the view of classifying them upon some future occasion, when they shall be in sufficient number or of sufficient importance to render it desirable to publish them.

BENEVOLENT SOCIETY.

The connection of a Benevolent Fund with the Association is too important to be passed by unnoticed. The Council are happy to congratulate the members on the fund having come into active operation; but, as a report will be presented detailing what has been done by the Benevolent Committee, it will not be necessary to do more in this place than strongly to recommend this object of the Association to the cordial support of the members. The Committee, at Cheltenham, last year, recommended collecting contributions in small sums. This recommendation has been acted upon

by a member at Warrington, who, through the assistance of friends, has collected upwards of thirty pounds, thus proving that, by a little exertion, a considerable addition may in this manner be made to the fund.

PAROCHIAL MEDICAL RELIEF.

The question of parochial medical relief, to which so much attention has been given by this Association, is still in an unsettled state; but, in compliance with the prayer of the petition sent last year from this Association to Parliament, the House of Commons have entered upon the investigation of this difficult subject, and it is much to be desired that the combined wisdom of our parliamentary representatives may be enabled to devise some means by which an improvement may be effected in the present system. For the convenience of members, and for the purpose of substantiating the statements contained in the Poor Law Committee Report, and with the hope of ensuring a complete and candid investigation, the Council appointed a competent delegate to be present at the medical inquiry. Two members of the late Poor-Law Committee appointed by the Association have also been examined before the Select Committee of the House of Commons, and have thus had an opportunity of detailing the evils, and pointing out the deficiences of the present system of parochial medical relief; and, at the same time, of supporting the recommendations for amendment contained in the two reports adopted by the Association, with such additions and improvements

as time and further consideration have suggested. It appears, therefore, necessary that a Committee should be specially appointed to watch the further progress of the subject through Parliament, and to suggest to the Council, from time to time, such measures as may appear to them necessary to meet circumstances as they arise.

PRIZE ESSAY.

The Committee appointed at Cheltenham to fix on the subject of the Thackeray Prize, sent in their report early in the present year, and the Council lost no time in making known their determination through the periodical press, and have announced that a prize of fifty pounds will be awarded to the author of the best essay, having for its object,—the investigation of the sources of the common continued fevers of Great Britain and Ireland, and the ascertaining of the circumstances which favour the diffusion of these diseases, and also those circumstances which may have a tendency to render them communicable from one person to another. The prize will be open to the competition of the members of every accredited school for medicine and surgery in the United Kingdom, and the essays are to be sent to the Secretaries of the Association on or before the first of January, 1840.

Each essay is to have a motto affixed, and to be accompanied with a sealed note, containing the name and residence of the author, and the motto is to be written on the outside of the note.

The Council are of opinion that at this meeting certain members should be appointed to fix upon the essay which is best entitled to the prize.

EMPIRICISM.

The Council are aware that one duty which should never be forgotten by the members of the Association, is that of assisting in every practicable way to improve the medical art, and to uphold the dignity of the profession.

The evils resulting from quackery are of so obvious a nature, and the system tends so much to obstruct the steady progress of medical science, that its suppression is devoutly to be wished. Within the last two or three years there has been a growing opinion that the Legislature should interfere, and endeavour to lessen these evils. It is, however, certain that no legislative enactment could be so framed as to prevent those who are ignorant from placing reliance on quacks, and it would not be easy to interdict the swallowing of their pills and potions; but though legislative authority may not have either the right or power directly to suppress quackery, it need not give it sanction and support, as is now done.

It is hoped that ere very long the whole question of medical legislation will be brought before Parliament by Mr. Warburton, when an opportunity will occur to frame such legislative enactments as may be practically beneficial. The Association, in the mean time, may be employed in calm and philosophical inquiry into the nature of the evils, their extent and remedies, by which means they may be enabled, at the proper season, to render valuable

aid in legislating upon this subject. The Council, therefore, advise that a Committee of members be appointed at this Anniversary, to consider the nature, extent, and evils of quackery, and to report on the same, with a view of devising such corrections as the exposition thus made may indicate.

SECTIONS OF MEMBERS.

The Council consider it desirable on every recurring Anniversary, not only to review the past, but also to look forward to the future; and endeavour to ascertain whether any further improvement can be effected in the existing organization of the Association. Acting on this principle, they are led to submit to the consideration of the meeting whether some good effect may not arise from dividing the Association into sections for the prosecution of particular departments in medicine. As the question of vaccination is at this time exciting considerable interest, a section of members may be appointed to whom the replies to the queries of the Council may be sent, and the whole subject referred to them for illustration; and if in this instance the arrangement be found to work well, sections on other branches of medical science may at a future day be appointed.

REPORT OF PROVINCIAL MEDICAL SCHOOLS.

The Committee appointed three years ago to draw up a Report on the state of Provincial Medical Schools, have been hitherto unavoidably prevented accomplishing the task assigned to them. Mr. Hetling's protracted illness incapacitated

him from pursuing the investigation as he had intended, and the lamented death of that gentleman, who was amongst the earliest and most zealous of our members, has made it necessary to assign that work to other hands. The Council consider that in having prevailed upon Mr. Turner, of Manchester, to finish the work which was commenced by their deceased and respected associate, they have ensured the concurrence of all in the propriety of their choice; and they have every reason to expect that the report will be finished so as to be published in the seventh volume of the *Transactions*.

CONCLUSION.

The Council now resign the important trust consigned to them at the last anniversary to those from whom they received it; and they venture to express a hope that during the period which has elapsed since the last Anniversary, they may be found to have laboured with zeal and diligence in the discharge of the important duties that devolved upon them. It is only by such means that they can expect to have their exertions crowned by the approbation of the members at large—an approbation which they are at all times anxious to deserve.

To conclude—The Council conceive it is not irrelevant to remind each member of the implied engagement which he enters into when joining this Association, to forward the enlightened objects for which it was instituted. These objects are dignified and ennobling, and if pursued with ardour and perseverance, must ultimately enlarge the boundaries

of knowledge, elevate the character of medical men in the community, lessen the sufferings of humanity, and thus confer a blessing upon mankind.

CHARLES HASTINGS, } Secretaries to the
J. P. SHEPPARD, } Association.

Dr. Macartney, of Dublin, proposed the adoption of the Report, and after having eulogized the talent and ability with which it was drawn up, said there was one point in the Report to which he should venture to hold an opposite opinion. In the course of his experience, and while being examined before Committees of the House of Commons, he had reason to be of opinion that quackery ought to be visited with most severe legal punishment, or at the least to be made equally penal with the crime of obtaining money under false pretences. He believed the Legislature possessed the power to cause its suppression if they would only exert it.

Dr. George Gregory, of London, seconded the resolution, and it having been put by the Chairman, was unanimously approved and adopted.

Professor Kidd, of Oxford, then moved, and Mr. Tudor, of Bath, seconded the following resolution—

That the thanks of the meeting be given to Dr. Boisragon, the retiring President, and that he be appointed a permanent Vice-President of the Society.

Dr. Shute, of Gloucester, here made a few observations, in which he intimated that the conduct of the Council had not been sufficiently decisive with

respect to the New Poor Law Bill; but the Chairman reminded him that this was not the proper time to discuss the merits of the Poor-Law question, and he must therefore request it might not be introduced at this stage of the proceedings. He could not, however, again sit down without remarking that there was no one point on which he was more certain than that every practicable endeavour had been made by the Association to remedy the evils of the present system of parochial medical relief. Dr. Shute again rose, and stated that there was another subject he wished to mention to them, which was the resolution under consideration. No person could have a greater respect for Dr. Boisragon than himself, but he put it to them whether it would not be creating a jealousy in the minds of gentlemen of inferior rank in the profession, if they were to be deprived of all the honours and titles of the Association by the partiality displayed towards its more prominent members.

Dr. Hastings explained that it was the law of the Association to invest every retiring President with a permanent Vice-Presidentship.

Dr. Kidd's motion was then put and carried by acclamation.

Dr. Boisragon, in returning thanks, regretted that his name should have been the cause of any interruption. He was convinced, from the good feeling which had always existed between himself and Dr. Shute, that no personal disrespect was meant to him by that gentleman, but that he had merely endeavoured to stop the progress of partiality. He (Dr. Boisragon) was as much exempt from selfish-

ness as any man; but for his humble though disinterested exertions he had had the distinguished gratification of being rewarded by the honourable distinction which the Association last year conferred upon him; and the manner in which this additional honour had been done him, demanded his warmest expressions of acknowledgment.

Dr. John Conolly said that if any thing was wanting to restore perfect unanimity to the meeting, it would be found in the resolution which he should have the honour of proposing to it; which was—

That their most grateful thanks should be given to the Secretaries of the Association, Dr. Hastings and Mr. Sheppard, and that they be requested to continue their services.

As one of the Council of the Association, he was well aware how much the welfare of the Society, and the success of the Anniversary Meetings, depended upon the judicious labours of that portion of the Council residing at Worcester, and especially on the indefatigable industry and zeal of the Secretaries. He knew that it had been objected to these meetings, that the members thus met together were too much occupied in praising one another; but this objection might be made to any society holding occasional meetings, since it was only on those occasions that they could publicly express their sense of unquestionable services. It would ill become them, meeting only once in the year, to be deterred by any fear of obloquy from giving utterance to the warmest feelings of the heart towards those whose qualities endeared them to all

by whom they were known. Nor should the measure of services like those of their valued *Founder*, be alone estimated by what was now seen of the benefits of the Association; each year added to its extent, and to its means of doing good. He had that morning, in his journey with some friends to the splendid city in which he addressed them, passed the humble source of the river Thames. From seven pure springs arose that important stream; at first a mere rivulet, stealing its quiet course through peaceful meadows, overshadowed by the branches of venerable trees, now and then meeting with obstacles which revealed its brightness, and by and bye glancing more broadly in the rays of the sun. Then they lost sight of it; but they well knew, that long after it had passed away from their view, it became a mighty river, bearing on its bosom, to and from the sea, much of the wealth and much of the power of this great empire. Such, it even then occurred to him, was the progress of man himself, but especially when associated with others for any good purpose. Such was, and such would be, the course of the Association; at first producing small effects, but gradually enlarging in design and power, and, long after all who now were active in it had disappeared from the scene, continuing to bear on its bosom valuable truths for the benefit of their successors and of mankind: and when those who followed them looked back to the early history of the Association, to what name would they turn their regards with more gratitude and admiration than to that of Dr. Hastings. Let no member, therefore, be reluctant to join in a sincere and honest expres-

sion of feelings, no less honourable to them than to the object of such feelings; and let the vote of thanks to the Secretaries be regarded not as a common-place compliment, but as a tribute well earned, and cheerfully, and gratefully, and most cordially paid.

Mr. Crosse, of Norwich, seconded the resolution, which was carried with vehement cheering.

Mr. Spender, of Bath, moved, and Mr. Crang, of Timsbury, seconded the next resolution, proposing—

That the thanks of this meeting be given to the Council of the past year, and that they be requested to continue their services, with the following additional members, and that they be empowered to add to their number:—Farnham Flower, Esq., Surgeon, Chilcompton; Robert Bickersteth Esq., Surgeon, Liverpool; Thomas Blackburn, Esq., Surgeon, Liverpool; Samuel Mc Cullock, Esq., Surgeon to the Workhouse and Fever Hospital, Liverpool; Hugh Neill, Esq., Surgeon, Liverpool; John Bevan, Esq., Surgeon, Liverpool; Henry Wood, Esq., Surgeon, Bath; R. Fitzwilliam De Barry Barry, M.D., Torquay; J. W. Ingleby, Esq., Surgeon, Birmingham; J. H. Walsh, Esq., Surgeon, Worcester; Edward Morris, Esq., Surgeon, Worcester; Henry Cartwright, Esq., Surgeon, Torquay; Richard Barnett, Esq., Surgeon, Stourport; John Greening, Esq., Surgeon, Worcester.

Dr. Forbes, of Chichester, moved, and Mr. Kitson, of Bath, seconded the next resolution, proposing—

That the thanks of this meeting be given to Dr. Otto, for his interesting communication on the Medical Topography of Copenhagen ; and that the following gentlemen be appointed honorary corresponding members of this Association :—

Russia: F. C. Markus, M.D., Chief Physician to the Galitzin Hospital, Moscow, Counsellor of State, Knight of the order of St. Anne and St. Wolodmir. Sir George Lefevre, M.D., Physician to the British Embassy, St Petersburgh.

Sweden and Norway: D. Holst, M.D., Professor of Medicine in the Royal Frederick's University, Christiana.

Denmark: C. Otto, M.D., Professor of Pharmacology and Forensic Medicine, in the University of Copenhagen.

Austria: Burkard Eble, M.D., Military Surgeon, Librarian of the Josephine Academy, Vienna.

Holland: J. L. Schroeder Van der Kolk, M.D., Professor of Anatomy and Physiology in the University of Utrecht.

France: E. C. A. Louis, M.D.., Physician to La Pitie, &c., Paris. M. Andral, M.D., Professor to the Faculty of Medicine, Paris.

Italy: Carlo Francisco Bellingeri, M.D., President of the Medical Faculty in the University of Turin, &c. Maurizio Bufalini, M.D., Professor of Clinical Medicine at the Hospital Santa Maria, Florence.

Portugal: Antonio Jose de Lima Leitao, M.D., Physician to the Hospital San Lazaro, at Lisbon.

United States of America: John C. Warren, M.D., Professor of Anatomy and Surgery, Harward University, Boston. Robley Dunglison, M.D., Professor of Materia Medica, &c., Jefferson College, Philadelphia.

East Indies : W. B. O. Shaughnessy, M.D., Professor of the Institutes of Medicine in the Medical College, Calcutta.

Brazils : Luis Vicente De Simoni, M.D., Secretary of the Imperial Academy of Medicine of Rio Janeiro.

Mexico: Guillermo Schiede, M.D., Member of the Academy of Medicine, Mexico.

AUSTRALIA: E. C. Hobson, M.D., Naturalist to the Colony of Van Diemen's Land, Hobart Town.

Mr. Godfrey, of Bath, moved, and Dr. Proud Johnson, of Shrewsbury, seconded the following resolution, which was agreed to—

That the President, Vice-Presidents, Dr. Forbes, and Dr. Conolly, be a Committee, to whom the several essays sent in to the Secretaries, on the subject of the Thackeray prize, be referred for adjudication.

Dr. Shute, of Gloucester, moved, and Dr. Holme, of Manchester, seconded the next resolution—

That the Poor Law Committee be re-appointed to watch the further progress of the subject through Parliament, and to suggest to the Council from time to time such measures as may appear to them necessary, to meet the circumstances as they arise; and that Mr. Rumsey, of Chesham; Mr. Ceeley, of Aylesbury; Mr. Addison, of Malvern; Mr. Toogood, of Bridgewater; and Mr. Yeatman, of Frome, form that Committee.

Dr. Hastings thought that as an imputation of supineness had been thrown out against the Council and the former Poor-Law Committee, it was his duty to state in a few words what had been done during the year. In the first place, the petition which had been agreed to at the last Anniversary Meeting, had been sent to Parliament, and he was happy to say that the prayer of that petition, asking for a Committee of Inquiry, had been granted. He was also glad to be enabled to state that one of the

Assistant Commissioners had given evidence in favour of almost every suggestion emanating from this Association last year. Mr. Serjeant Talfourd had also been applied to, and had promised by every means in his power to lend his powerful advocacy in the House of Commons towards mitigating the evils of the present system of parochial medical relief. And, lastly, the Council finding it desirable to employ a delegate to urge their opinions with respect to that bill before the Poor-Law Committee, had appointed the indefatigable Mr. Farr to that post, who would be happy to receive suggestions from any gentleman who might feel disposed to forward them.

It was afterwards announced that Mr. Farr's address was No. 8, Grafton Street, Fitzroy Square; and that any communication would be received there, or by Mr. Churchill, medical bookseller, Princes Street, Soho.

Mr. Soden, of Bath, brought forward the subject which had been mentioned by Dr. Johnstone, of Birmingham, at the preceding Anniversary relative to members compounding for their subscriptions by the payment of ten guineas. He said that this was a question which required mature deliberation, and there were many members who were disposed to take a different view of it from that which was entertained by Dr. Johnstone: he thought it therefore desirable, in that gentleman's absence, to defer the question, and he would move—

That the subject be postponed to the next Anniversary.

This was seconded by Dr. Wm. Conolly, of Cheltenham, and carried.

Dr. Cowan, of Reading, in moving the following resolution, stated that he fully agreed with the learned Dr. Macartney, who had stated at the commencement of the evening's proceedings, that quackery could be at least restricted, if not wholly prevented, if the Government would only cease to hold out rewards for it by stamp and advertisement duties, which, at present, acted as a substitute for medical knowledge. No stamps should be issued to protect such medicines, nor any advertisement allowed, but in the case of such as had previously received the sanction of a regularly constituted body of the profession. He begged to move—

That the Central Council be empowered to form a section to consider the nature, extent, and evils of quackery, and to report on the same at the next annual meeting.

Mr. Bally, of Bath, seconded the resolution.

Dr. Barlow thought it advisable, instead of forming Committees promiscuously, or without previously having the consent of the persons who were intended to compose them, that the selection should be left to their worthy Secretary, who was best qualified to know who were able and willing to serve.

Dr. John Conolly very much regretted that the Association should be forced, as it seemed to him to be, to entertain this question, in consequence of its having been commented upon by a portion of the medical press. Concerning the mischief and villainy of quackery, there could be but one

opinion among honest medical men; but he could not suppose there was any reflecting person who really believed that any act of the legislature could enforce, or that the wit of man could devise, effectual remedies for suppressing or preventing it. Quackery took so many forms, that it was impossible to define it; and the public, profoundly ignorant of medicine, are led continually to have recourse to quackery, in some shape or other, notwithstanding all that regular practitioners might do to put it down. By noticing quackery, therefore, and going in form before Parliament to complain of it, the members of the Association would be merely shewing a feeling of irritation, without effecting any good. The better course for the Association would be, steadily to continue its useful career; giving encouragement to the investigation of all branches of medical enquiry, and patiently waiting until the public were sufficiently instructed to know that the principles of therapeutics were only to be safely carried into practice by men of good professional education.

Dr. Hastings thought it desirable something should be done, if it were only to satisfy those members who were so strenuous in requesting that a Section should be formed for the purpose.

Dr. Barlow agreed with Dr. Conolly in thinking the suppression of quackery to be impracticable; but still he thought the present was a harmless proceeding, and would satisfy many of their members.

After some further conversation it was thought desirable to pass the resolution, leaving the appointment of the Section to the Secretaries and Worcester Council.

Dr. Hastings then observed that the next resolution would require very deep consideration. He had received a communication from the Southern Branch at Salisbury expressing dissatisfaction at their pecuniary allowance from the Parent Society, and stating that if those payments were even increased two-fold it would not be too much, and would likewise, in the same ratio, be productive of extended benefits to the Parent Society. He (Dr. Hastings) considered this statement to be decidedly wrong in a pecuniary point of view. If they looked to the original laws they would find that the guinea subscription was intended as a payment for the volume of *Transactions*. The members of the Southern Branch had received 188 volumes in this way, and had only paid 110*l.* in return, thus leaving a considerable balance against them. The accession of branches, in a pecuniary point of view, was not beneficial to the Society; as the members had thus increased, the number of the *Transactions* to be printed had also increased from 900 to 1250, and the printing and the coloured drawings were necessarily very expensive. He would then leave it to them to consider how far they could fall in with the views of the Southern Branch.

Dr. Malden observed that it was a very disagreeable duty to deny assistance to any part of their Association; but they must remember that as they were a species of warm-blooded *crustacea*, invested with the most extraordinary powers of re-production of limbs, supposing a remote joint turned round upon the central limb, and demanded more nutriment than could be conceded, the same retort

could be made which had been used by Menenius Agrippa when the poor of Rome thought they were about to be starved in the city—"Tell them the story of the belly and the members." He concluded by moving a resolution—

That the demands of the Southern Branch cannot be conceded.

Dr. Streeten seconded the resolution.

It being suggested that some of the members of the Southern Branch might probably be in attendance on the following day, the resolution was postponed till that time.

It was then moved by Mr. Mortimer, of Clifton, and seconded by Mr. Yeatman, of Frome—

That Liverpool be the place of meeting next year, and that Dr. Jeffreys be the President-elect; which was unanimously agreed to.

Dr. Jeffreys, of Liverpool, returned his sincere thanks for the great honour they had done him and the profession at Liverpool, by selecting that place for their meeting.

Moved by Dr. Blakemore, of Bath, and seconded by Mr. Hebb, of Worcester—

That Dr. Symonds, of Bristol, be requested to deliver the Retrospective Address at the Anniversary Meeting of 1839.

Mr. Dodd, of Chichester, in moving the next resolution, said—I rise to make a proposition to this meeting, for which I hope and believe they have been favourably prepared by the printed circulars

which all the members of this Association have received. In moving the expediency of forming a section for the particular purpose of studying the subject of small-pox and vaccination, I feel confident that the events of the past year, when that dreadful scourge has been epidemic in most parts of the kingdom, will have strongly influenced you all to desire that more light should be thrown upon this intricate and important subject. It would ill become me to make myself prominent on this occasion, when men, much my seniors and superiors, acknowledge themselves but learners; but when all come forward as pupils, it little matters who holds the book, and I confess it is a matter of great pleasure and encouragement to me to see those who have for many years been engaged in this important subject, now offering themselves freely in forwarding the great object of science, and contributing, with a generous zeal, their stock of knowledge towards the general fund, and for the further eliciting of truth. I trust that this example of candour and liberality, will not be lost upon us, comparatively, the junior members of the same liberal profession. I cannot here also pass unnoticed the kindness and liberality of the army and navy medical departments: they have expressed their willingness to further this inquiry, by the communication of any information on their respective departments which may be desirable; and I have already to thank them for valuable assistance. The plan which I would propose for the organization of the section, is briefly this:— That a certain number of medical men should unite their labours in the investigation

of the different branches of the subject of small-pox and vaccination; that the results of their enquiries shall be digested into one general report by the Secretary, and read at the ensuing annual meeting, or published in the *Transactions* of the Association. I am happy to be able to say that there is no lack of willing labourers, since, within these few days, several of our members have signified their readiness to co-operate. My object in proposing the formation of this section is two-fold; first, it has long appeared to me that the general state of vaccination in this country was lamentably defective, and loudly called for the interference of the legislature; and, secondly, I think that upon a well digested and efficient plan of co-operation among the members of this Association, a vast mass of important facts may be collected and brought to bear upon a subject where, confessedly, much is to be learned, and with every part of which, the happiness and welfare of mankind is closely involved. Upon each of these two points I must beg your indulgence while I say a few words.

I shall not now enter upon the general question of the merits of vaccination as a prophylactic; neither, on the subject of legislative interference, am I prepared to recommend any specific measure for the adoption of the Association; this will form part of the duty of the proposed section; but I must state to you a few facts, indicative of the necessity for taking this matter deeply into consideration. I have this year been in correspondence with the medical men of several of the principal towns of England, and from almost all of them I have

learned,—first, that small-pox has prevailed lately to a very considerable extent; some of them state that it is scarcely ever entirely absent from their neighbourhood, and that its occurrence after vaccination is become very frequent: secondly, that though the credit of vaccination stands high, and though the educated classes are constant in their applications for it, yet that the lower classes are often exceedingly dilatory in bringing their children forward, even when the operation is gratuitously performed: thirdly, that gratuitous vaccination is performed to a very various extent in different parts of the country; in some places not at all as a system, and in others far from being so general as the state of the population demands: fourthly, that vaccination is frequently performed by non-medical persons: fifthly, that inoculation of the small-pox is, in some parts, performed to a considerable extent, not by medical men, but by ignorant persons of the lower class, who take advantage of the defective state of the laws, to fill their pockets at the expence and imminent risk of the public. Several practitioners, in their correspondence with me, refer the appearance of the small-pox in their neighbourhood, entirely to the cases in this manner inoculated; and I may state that I have ascertained that nearly two hundred were last year inoculated in Chichester and its vicinity.

With regard to the apathy of the parents in the lower classes, I have to state further that it is strikingly illustrated by the fact, that on an alarm of small-pox being near them, they very frequently bring their whole families to be vaccinated together

for the first time; shewing that the operation had been entirely neglected during the increase of the families, the children being arrived at an advanced age before it is resorted to. Now the evil of this is obviously most grievous. Besides the risk of small-pox which the child has endured hitherto, vaccination is thus adopted at an age much less favourable than infancy, and much more liable to those numerous little accidents which so frequently interfere with its progress and efficacy. It is the general opinion, I believe, that the age most favourable for vaccination is from three months to six months. The season of dentition is thus avoided, and the greater liability of having the vesicles scratched or broken in the ages after dentition, is obviated. Now to shew how little this principle is acted on at present, of six hundred and seventy-one cases of vaccination, I found that not quite one hundred were under six months, and only one hundred and eighty-nine were under a twelvemonth: of these cases, then, about five hundred, or five-sixths of the whole, were vaccinated at an age the least favourable for the operation, and we may therefore calculate, that in a large proportion, by accident or otherwise, the proper and protective course of the operation was interfered with. Should it be found upon enquiry that the experience of other surgeons tallies with mine, will not this alone be a fully sufficient reason for attempting some public measure for better regulating the practice of vaccination? If we want further proof of the neglect of vaccination, we find it in the numbers of cases of small-pox occurring in unvaccinated persons, when that disease becomes epidemic. If due means were

exercised to diffuse the blessings of vaccination as universally as they ought to be, we should have few, if any, cases left to the unmitigated fury of the pestilence: whereas we know that of the entire cases of small-pox, those occurring in unvaccinated persons generally bear a very large proportion, even in the present day. This surely ought not to be, now that we have known, and had the opportunity of appreciating, the value of vaccination for upwards of thirty years. It was, as you well know, the fond hope of the great discoverer of vaccination that the extermination of small-pox was not only possible but probable; and though the experience of late years has entirely damped this hope, yet I believe I am fully borne out by fact, in saying that we may advance far, very far, beyond our present state of security, by the adoption of proper precautions; in short, I am convinced that if we may not hope for its extermination, we may certainly keep it in check: if the monster cannot be destroyed, he may be effectually chained. I am informed by Professor Hecker, of Berlin, that small-pox, since the general and systematic adoption of re-vaccination, is almost unknown in Prussia, except as a mild and insignificant disease. From Professor Holst, of Christiania, I find that in Norway this disease was for fourteen years after the introduction of vaccination entirely unknown, so that for many years the professor of medicine did not think it necessary to lecture upon it; and that country is now, on account of a recent visit from it, following the example of Prussia in establishing a regular system of re-vaccination. All countries acknowledge the

value of vaccination as a preventive in many cases, and as a powerful check upon the virulence of small-pox in almost all others ; and when the laws which regulate its influence shall have been investigated, the defects in our present system of operation discovered, and the proper course clearly laid down and thoroughly acted upon, I doubt not that at any rate we may stand as well as we see that other countries do : in fact, it cannot be considered otherwise than a disgrace to us that this country, in which the great prophylactic discovery originated, should be so far behind others in the practical application of it. How does shame reflect upon us as a nation for the folly of having hitherto left ourselves exposed to the attacks of this enemy, without any adequate public measures of precaution or defence. In Norway, Sweden, Denmark, Prussia, Russia, Austria, in fact, in almost all the principal continental states of Europe, legislative enactments render vaccination compulsory. They also limit the practice of the operation to regularly educated practitioners ; and to insure as far as possible the due and proper performance of it, every vaccinating surgeon is required to report the particulars of each case to a person appointed for that purpose. What is the case in this country ? The only encouragement given by government to vaccination, the only check provided by it against the fearful irruptions of the torrent, is the National Vaccine Institution, whose influence, except for the mere supply of virus, is entirely limited to the metropolis. No rewards, no encouragements, and, still more, no compulsory measures are employed to act against the natural apathy of

those multitudes who will not look forward for their own security and that of their families. Then, again, vaccination may be performed by any one, however ignorant and incompetent; and hundreds, indeed I may safely say thousands, are annually vaccinated in this way, by persons who know nothing of the difficulties likely to occur in the progress of the full protective developement. Moreover, the only preventive to the wilful spreading of small-pox itself, is an Act which enables you to indict as a nuisance the person who exposes the infectious patient, therefore, absolutely not interfering at all with the mischievous practice of inoculation itself. I may, however, sincerely congratulate this meeting and the country at large upon the information which I have lately received from Dr. Gregory, that the late irruption of small-pox has called the attention of our Legislature to this subject, and that steps are about to be taken for the remedying of the present evils. Here we have an additional inducement to exert ourselves in forwarding the views of government, by lending our aid in detecting the errors of the present system, and in discovering and pointing out the corrections that are discernible.

I must now be permitted to say something upon the objects of the proposed section under the head of science. And here, if I were to attempt to enter fully upon the several bearings of this vast subject, I must necessarily discuss topics of considerable difficulty, and in the present state of our knowledge, many still involved in the mists of obscurity, and should be compelled to detain you longer than would be desirable. I shall therefore only briefly

allude to a few of the most important subjects which will come under the consideration of the section, and endeavour to shew how beneficially the proposed system of enquiry may be expected to work under the fostering auspices of this Association. It is too much the prejudice both of the medical profession and of the public, that on the subject of so apparently simple an operation as vaccination, the whole of its bearings are pretty clearly understood, and that there is little more to be learned. But to point out the dangerous fallacy of such a view of the case, I would only request attention to the following statement. Where we dread the incursion of so formidable a foe as small-pox, and when a protection offers itself to us in vaccination, it is of course an object of the greatest interest to have some means of satisfying our minds that the protection is complete, that the remedy has been efficiently and effectively administered, and that as far as its protective properties go, we have reason to be satisfied that they are fully exercised in our behalf. Now, a criterion of this kind is still a desideratum. I fear that at present we possess no permanent sign as an infallible proof of the full and protective action of vaccination having taken place in the system. The only sign that has hitherto been relied on, is the scar which has been left upon the arm after the operation. Upon the appearance which this presents, the opinion of security is entirely grounded in the army and navy, and indeed we may say generally. It remains yet to be proved how far my observations are correct; but as far as they have gone hitherto, they lead me

to the conclusion that this mark is by no means deserving of our full confidence. Of fifty-seven cases which I examined last year, which had been fully exposed to the contagion of small-pox and had escaped, only six bore perfect marks, in fourteen the marks were slightly defective, in thirty very imperfect, and in seven there was no mark at all. In seventy-seven cases of small-pox after vaccination where the arms were examined, one bore a perfect mark, fourteen were slightly defective, forty-seven were very imperfect, and fifteen had no mark. Now, the comparison of these lists evidently shews something in favour of the cicatrix, as a criterion of safety, but by no means equal to what is desirable on a point where accuracy is of so much importance. Of the hundred and thirty-four cases just mentioned as exposed to the contagion of small pox after vaccination, and of which fifty-seven escaped, and seventy-seven failed, only seven shewed perfect marks, and of these one failed; twenty-eight more bore marks which we should be inclined to rely upon, though not quite perfect, and of these fourteen failed; while of seventy-seven, with very imperfect marks, thirty escaped, and of twenty-two with no mark at all, seven escaped. It is painful to shake the foundations of our confidence,—to find that hollow and unsound upon which we were reposing in security; but the way to rest in safety is to look the truth in the face, and when a part of the building is defective, to endeavour to replace it with a material more durable and more worthy of our confidence. The question then of the characters, the progress, and the durability of the vaccine cicatrix, I would hope

to see investigated by the proposed section. This question, however, which I have alluded to only as affording one palpable instance of what there is yet to be learned in the general enquiry on vaccination is but one of the least among a great number of interest and importance which must occupy the attention of the section. You all know that since the occurrence of small-pox after vaccination, a theory has been started, and pretty generally received, that the protecting power of vaccination wears out in the course of time, and consequently the renewal of its influence becomes necessary. Now, supposing this theory to be correct, what is the limit of the duration of the protective power, and after what interval does re-vaccination become necessary ? This matter is at present *sub judice,* or rather, it is answered only according to the judgment or caprice of each practitioner ; some fixing the term for a very short time, and others at seven, ten, fifteen, and twenty years. The Prussian Government has ordered that the army should be re-vaccinated every third year, and as a measure of extreme precaution this probably is well where it is practicable ; but this proceeding is not of course to be considered as pointing out the precise term of protective duration. Dr. Otto, of Copenhagen, states that only those vaccinated persons were attacked with small-pox whose vaccination had taken place five years previously. This statement, however, will not be borne out by the experience of this country. The difficulty in ascertaining correctly this law of the protective power is very great.

Of course we are arrested *in limine* till we have satisfactorily shewn what are the permanent as well as temporary signs of the true protective vaccination. This datum is essential before we can find a starting point from which to calculate. All the calculations, therefore, which have been hitherto made to ascertain the limit of the protective power must be received as only an approximation to the truth. Here then is a wide and fruitful field for research.

The proportion of the vaccinated which are unprotected, a question closely connected with the preceding, will form another enquiry. On this subject again we shall be compelled, in great measure, to commence *de novo*. If we allow, as I think we must, that the sign at present relied upon as indicative of true protective vaccination having taken place, I mean the cicatrix, is insufficient, we then can only rely upon those cases, the history of the progress of whose vaccination has been carefully recorded, in making our calculations of the question before us; and the proportion of these cases will be, I fear, but small, particularly if I am informed correctly, that in one of the principal of our vaccine institutions, not more than one in twenty make their appearance after the operation, to verify its success. Casting out, then, all those cases of *variola post vacciniam*, of whose vaccination we have no authentic recorded histories, our means of ascertaining the proportion which the unprotected bear to the protected, are at present, I fear, very limited; and here much may be expected only from the combined and persevering labours of a well appointed section.

When again I mention the question of the origin and nature of cow-pox, and the relation which it bears to small-pox and some other eruptive diseases, involving, as it does in a great degree, some of the enquiries on contagion, you will perceive that there is no lack of subject matter to occupy the attention of the section, or to justify you in its appointment. But here I have alluded to a part only of what demands investigation, both statistical and practical, connected with the great question of protection from small-pox. The view indeed opens as we proceed, we cannot as yet see its limit. We offer to launch ourselves upon an ocean of which the misty horizon only is discernible; but we do it cheerfully; we only ask your sanction, and request you to bid us God speed, and we enter upon it fearlessly, convinced that whether our frail bark reach the opposite shore or not, every treasure we raise from the depths will amply repay our labours, engaged as we are on an errand, than which the philanthropist cannot desire one offering a better opportunity for the exercise of his benevolence, or the scientific man for the good employment of his talents.—The following is the resolution—

That the following gentlemen, in conjunction with the former Committee, be a section to whom the replies to the queries of the Council on vaccination and small-pox shall be sent, and that the whole question be referred to them for illustration:—J. Baron, M.D., Chairman; Dr. Conolly, of Cheltenham; A. T. S. Dodd, Esq., of Chichester, Secretaries; Dr. Gregory, Physician to the Small-Pox Hospital, London; Dr. Kendrick, of Warrington;

Dr. M'Crorie, of Liverpool; — Ellison, Esq., of Liverpool; J. P. Teale, Esq., of Leeds; — Loe, Esq., of Leeds; D. Noble, Esq., of Manchester; Dr. Shapter, of Exeter; — Greenhow, Esq., of Newcastle; R. T. Gore, Esq., of Bath; Dr. Engledew, of Portsmouth; Dr. S. Cox, of Edinburgh; Dr. Heathcote, of Rotherham; R. Nunn, Esq., of Colchester; Dr. Streeten, of Worcester; Dr. Ogier Ward, of Shrewsbury; Dr. Goldie, of York; Dr. Brown, of Sunderland; F. Ryland, Esq., of Birmingham; J. G. Crosse, Esq., of Norwich; Dr. Bullar, of Southampton; Dr. Conolly, of Warwick; C. H. Hebb, Esq., of Worcester; Dr, Malden, of Worcester; Dr. Evans, of Gloucester; and that they be empowered to add to their number.

Dr. Shapter, of Exeter, seconded the resolution, which was agreed to.

Dr. Hastings announced that he had received nearly one hundred replies to the queries issued by the Committee on the subject of the small-pox, and he had no doubt that on the receipt of the whole of the replies, much valuable information would be elicited.

Dr. Gregory mentioned the exertions now making in France and other foreign countries, to extend the bounds of knowledge relating to small-pox and vaccination. If active measures were not taken by this Association, England would be superseded by foreigners in this branch of medical science.

After the transaction of other necessary business the Meeting adjourned till the following day.

MEETING HELD AT THE LECTURE ROOM OF THE BATH LITERARY INSTITUTION, THURSDAY, JULY 19TH.

At half-past twelve o'clock on Thursday the members again met at the Lecture Room of the Institution, when various intereresting facts were elicited. Dr. Gregory, of London, produced some papers charged with new "points" of vaccine lymph, which he distributed to the gentlemen near him; also a small bottle, with a finely closed stopper, well adapted for the purpose of preserving the vaccine fluid perfectly energetic for a long time; Dr. Gregory stated that any gentleman wishing to procure a supply of the "point," might get any quantity by applying to the Physician of the Small-Pox Hospital, London.

The general business commenced by Dr. Barlow, on the motion of Dr. Hastings, being called to the chair.

A paper on a "peculiar affection of the uvula" was announced, by the Secretary, as having been received that morning from Mr. Thompson, of Whitehaven.

Dr. Johnstone Aitkin, of Poole, read a communication respecting the use of the sea plant called *Fucus esculentus,* or "tangle," instead of the more expensive and less suitable gum bougies, in cases of stricture of the rectum and urethra. He had used it successfully in his own practice, and he laid many specimens of it upon the Council table.

It grew of various thicknesses, from that of a small quill to one inch and a half in diameter, and of various lengths, from a few inches to several feet.

The thanks of the meeting were unanimously given to the Authors of these communications, and they were directed to be printed in the seventh volume of *Transactions*.

Dr. Hastings announced that the Report of the Provincial Schools had not yet been prepared by Mr. Turner, but that gentleman would make every exertion to get it ready for the next volume of *Transactions*.

Dr. T. Boisragon, on being called upon to mention to the Association a small work which he was about to publish illustrative of osteology, rose and said,—"Mr. President, I must apologize for trespassing upon the time of the Association for so trivial a purpose as that for which I have now the honour of addressing the members. It was not my intention, Sir, originally, to have obtruded myself on their notice, more than merely to have mentioned privately to a few individuals, what were my views in publishing some lithographic drawings of osteology; being, however, called upon by my kind friend, our worthy Secretary, Dr. Hastings, to put them before the members publicly, I take the liberty, with your permission, of stating shortly what I propose to offer to the public, and my reasons for mentioning it now to the members of this Association: My intention then, Sir, is to

publish what may be called a Sketch of Osteology, being a series of lithographic engravings, representing one view of each of the principal bones of the body, upon tinted paper, relieved with white, to imitate chalk drawings. The number of plates will be five, and consist of the following drawings, viz:— the three bones of the leg, the three bones of the arm, the pelvis, the lumbar, dorsal, and cervical vetebræ, the atlas and dentata, the clavicle, the scapula, three of the ribs, the hand and foot, the inferior maxilla, and two views of the base of the skull, one of the interior and one of the exterior. Here I may seem to have departed from my original plan of giving only one view of each bone; but two views of the skull I considered absolutely necessary, even in an outline of osteology, to the proper understanding of so difficult a part of this branch of the science, as the cranium. I have not given views of the small bones comprising it, separately, because one of each would not have been sufficient, and it is almost impossible to understand their structure without having them frequently in the hand. I am aware it may be asked, if the students are expected to have the bones themselves, why should they have these drawings? In answer to this, I say that although students should have the small bones of the cranium disarticulated, they should also have drawings such as these, in order to understand correctly their juxta position, and which it is very difficult to understand without either another skull or drawings; these will however, I flatter myself, supply the place of an extra skull, and save that expense. Such a mode of studying I have found very useful.

My chief object in publishing but one drawing of the principal bones is, that students may have an opportunity of procuring finished drawings of bones of the size of life as a sort of memorandum to assist them while reading, containing the most comprehensive view of osteology compatible with the most moderate expense, authentic plates of the same from the early works of Albinus down to the superb modern publications of Cloquet and Quain, being of too costly a character to fall within the means of junior students. This twofold object I consider to be gained by my having, in the one view taken, always selected that which presented the greatest number of important points at once, and thus saving the expense of an extra plate, which expense I was fearful, by entering more extensively into the subject, would be incurred to an extent greater to the student than the advantage gained. It is obvious that every student should see the bones themselves in order to get a correct knowledge of them; and having done this, the plates now presented to the public will, I conceive, be quite sufficient to refresh the memory upon all the important points; added to which, I propose upon each page opposed to the drawing, to give an outline of the same, with the names of the parts upon it, so as to render the work as complete as possible. The better to ensure the cheapness of the publication, and the correctness of the plates, I have undertaken the lithography myself, from drawings which I made from the best specimens I could procure from the Anatomical Museum at Edinburgh, and with the loan of which I was kindly

favoured by Dr. Monro. I have been particularly careful to represent even the texture as nearly as I could of the different parts of the bone, as e. g. the hardness of some, the polish of those parts opposed to friction, and the diaphanous appearance of others, &c. Lastly, in order that I might run as little risk as possible in this undertaking, I have ventured to name it to the Association, in order that should any member think of taking a copy, he might favour me with his order and name, which would considerably diminish the expense of publication, and thereby better enable me to publish at a cheaper rate for the use of students. The price of each plate, Sir, will, I fear, be 1s. 6d., including references; less than that would, be barely sufficient to defray the expenses."

A discussion next took place between Dr. Gregory, of London, Mr. Barrett, of Sherborne, and other gentlemen, on the subject of small-pox, which was brought to a close by the necessary reading of the Retrospective Address.

Dr. Malden, of Worcester, was then called upon to read the Address,* after which,

Dr. John Conolly said that in moving—

That the thanks of the meeting be given to Dr. Malden, and that the oration be printed, he was, he felt, only expressing the wish of those by whom he was surrounded, after listening to the very comprehensive and eloquent address which had been delivered to them. Those who knew Dr. Malden,

* See the next article.

were prepared to expect every thing that great professional acquirement, various and graceful learning, and enlightened and benevolent feelings, could contribute to make an oration estimable; and although there must in so long a discourse be points on which the members held various opinions, he was sure they all felt anxious to convey to Dr. Malden their sense of the obligation he had conferred upon them by his valuable and admirable discourse.

Mr. Partridge, of London, seconded the resolution.

The request of the Southern Branch was then finally and maturely considered; and it being ascertained that they were now in the possession of the greatest amount of assistance which could be prudently awarded to them, the following resolution was agreed to, after Mr. Crosse, of Norwich, had stated that the Eastern Branch of the Association found the appropriation of one-seventh of their payments to be more than sufficient for their liabilities—

That it is with regret that this meeting is obliged to refuse the request of the Southern Branch; but a larger allowance for expences than that settled by the Association at Cheltenham, cannot with prudence or propriety be conceded to the Branches, since agreeing to further deductions would cripple the resources of the Parent Association, and might ultimately bring its financial affairs into difficulty.

Dr. Conolly, of Cheltenham, read the Report of the Benevolent Fund Committee, as follows—

REPORT OF THE BENEVOLENT FUND.

The Central Committee for the Management of the Benevolent Fund of the Provincial Medical and Surgical Association, have much gratification in being able to state that the progress of the Charity, although not so rapid as its most ardent supporters might desire, is, notwithstanding, steadily increasing; and such is the confidence of the Committee in its ultimate complete success, that they have not hesitated to continue its operations to as great an extent as possible, under the firm conviction that so good a cause cannot fail in the end to secure the co-operation of all the members of the Association.

As will be seen by a reference to the Treasurers' accounts, annual subscriptions have been received during the past year to a larger amount than heretofore, and they have been made available to the relief of some very urgent cases of unavoidable misfortune among our professional brethren and their families.

The fund has now been in operation during two years; in the first year, as was stated in the report read last year at Cheltenham, *two* very urgent cases had been efficiently relieved; and during the last year the committee have had the satisfaction of affording relief to *four* cases which appeared to them to have strong claims on the charity.

In one case, recommended by the Bath Central Committee, a gentleman of unimpeachable character who had practised as a surgeon in New South Wales, fell into bad health, and was obliged to return to this country; his pecuniary means

being inadequate to his support, he was enabled by the slight help of *twenty pounds* at one time and *ten* at another, from this fund, added to the benevolent aid afforded him by the profession at Bath, to prolong his stay in that city (where he found great advantage from the mineral springs) until such time as there was a prospect of his health being re-established, and of his being able to return to New South Wales, and work out his own independence. In a second case, the small sum of ten pounds was added to a subscription to place the orphan son of a surgeon formerly practising at Cheltenham on the foundation in the London Orphan Asylum. In a third instance, five pounds was remitted to Norwich at the instance of Mr. Crosse and Mr. Johnson, to relieve the urgent distress of the aged widow of a medical man, who by the death of her husband was left totally unprovided for, and dependent upon the benevolent aid afforded her in that neighbourhood. A fourth case occurred very recently in Cheltenham. A highly respectable surgeon, a member of this Association, in the prime of life, and just beginning to have a tolerable practice in his profession, was cut off in a few days, by typhus fever, caught in the performance of his professional avocations, and has left a wife and seven children totally unprovided for. A subscription for their benefit has been entered into by the benevolent inhabitants of Cheltenham, to which *forty pounds* has been contributed from this fund. On all these occasions, the Committee have had deeply to regret the limited means at their disposal, as the urgency of the cases would have justified grants to a much larger amount, had

it been in their power to make them. The sums they have been able to contribute, doubtless will appear very small in amount for each case ; but the Committee have reason to believe that they were nevertheless of essential service. And it must be borne in mind, that by the rules and regulations of the Society, the *donation* fund cannot be touched for these purposes, and that it is only the annual subscriptions that are available for the relief of these cases, as well as for all the incidental annual expenses. It will be thus seen that the Committee have in some measure been compelled to anticipate in a small degree the subscriptions of the ensuing year, to relieve even the few cases they have mentioned ; and when they add that they have been under the necessity of refusing aid in several other cases which appeared very deserving of it, they trust it will not be necessary to say another word in recommendation of this charity to the attention of the members of this Association. It is inconceivable how much good might be done, if each member would but consent to contribute even the small sum of five shillings annually to this admirable charity ; and there are few among us who could not spare this small sum ; whilst many others whom Providence has blessed with larger means, will doubtless contribute in proportion, and thus be the means of relieving many meritorious but unfortunate members of our profession from the pressure of unavoidable calamity.

The Committee feel it would be unjust when speaking of the increase of annual subscriptions this year in comparison with former ones, not to

mention with gratitude the benevolent contribution of *33l.* 5*s.* from the ladies of Warrington and its vicinity, in addition to which a Local Committee has been organized in that town, and eight annual subscribers have been obtained; thus affording an example well worthy of imitation, and shewing how much may be done by perseverance and well-directed efforts in the good cause. A very benevolent lady, Mrs. Stephenson of Worcester, has also most kindly remitted to the Treasurer, through Dr. Hastings, the sum of three pounds collected by her in small sums for the charity.

Since the Annual Meeting of last year, in addition to forming a Local Committee at Warrington, the Central Committee thought it their duty to distribute a circular to members of the profession, by means of the different Local Committees, stating the objects of the charity, what it had already effected, and what it would be capable of doing if it met with adequate support.

The Committee cannot conclude this report without beseeching every member of the Association to take the claims of the charity into their serious consideration. In every large town where there is not already a Local Committee in existence, it would be highly desirable that one should be immediately constituted; and where Local Committees are already formed, it is equally desirable that they should act with energy and industry; and by these means the Central Committee feel convinced that a fund will soon be established, alike honourable and beneficial to our profession, and a proud and lasting monument of the benefits derived from the formation of the Provincial Medical and Surgical Association.

TREASURER'S ACCOUNTS OF THE BENEVOLENT FUND.

1837–8.

Receipts.

	£.	s.	d.	£.	s.	d.
Donations	34	4	0			
Subscriptions	84	6	6			
				118	10	6
Balance in hand last year				115	3	0
				233	13	6
Disbursements as below				89	5	0
Balance in hand				£144	8	6

Disbursements.

	£.	s.	d.	£.	s.	d.
Stationary, postage, and porterage	1	0	0			
Printer's bill	3	5	0			
				4	5	0
Charitable aid as per Report				85	0	0
				£89	5	0

Dr. Gregory recommended them to persevere, and said that a similar committee in the army which began in 1820 with means quite as small, could now boast a capital of 12,000*l.* in the funds, and an available fund of 380*l.* per annum.

Dr. Fox, of Bristol, moved that the report be received.

Dr. Heywood, of Blandford, seconded the motion.

Mr. Hare, of Leeds, said that in a similar committee in West York, there were no disbursements allowed till a capital of 2,000*l.* had been raised.

Dr. Conolly said that it was intended not to distribute the donations to this fund, but merely the annual subscriptions.

Dr. Ring, of Reading, suggested the formation of Local Committees to the Benevolent Fund, and promised to form one for his district.

Mr. Tudor, of Bath, moved, and Dr. Feild, of Worcester, seconded—

That the Committee appointed to watch over the interests of the profession be requested to continue their services.

Dr. Kidd, of Oxford, moved, and Mr. Flower, of Chilcompton, seconded--

That the thanks of the meeting be given to the Mayor and Corporation of Bath, the Bath Royal Literary and Scientific Institution, and the Bath Horticultural Society, for the accommodation afforded by them to the Association on this occasion.

Dr. Pritchard, of Bristol, moved, and Mr. Estlin, of Bristol, seconded—

A vote of thanks to their worthy President, which having been briefly acknowledged, the meeting separated.

PART I.

ARTICLE I.

THE RETROSPECTIVE ADDRESS,

DELIVERED AT THE

SIXTH ANNIVERSARY MEETING

OF THE

PROVINCIAL

MEDICAL AND SURGICAL ASSOCIATION,

HELD AT BATH, JULY 18th and 19th, 1838.

BY JONAS MALDEN, M.D.,

Senior Physician to the Worcester Infirmary.

Scribendi rectè sapere est et principium et fons.

The knowledge here enjoined is of two kinds: first, a knowledge of yourself and of your own powers; and next, a thorough acquaintance with your subject. The author who has attained the first knowledge, will not select a subject beyond the compass of his own intellect; and he who has attained the second, will have little difficulty in transmitting the information he possesses into the minds of others. True eloquence is based upon the serious and hearty love of truth: for he whose mind is possessed with the

fervent desire of acquiring knowledge, and the charitable wish to impart it to others, has words at command, which, like humble and airy servitors in well ordered files, fall, as he would wish, aptly into their own places.

But when your Retrospective Chronicler of the year contemplates the mass of materials it is his duty to endeavour to arrange and elucidate—when he is aware of the small space of time in which this survey is to be accomplished—when he knows how many of the numerous contributions to our science are literally out of his depth—when he finds that he has lived long enough to forget much which he once knew, and that the laborious practical engagements of his profession have permitted innumerable competitors in science to pass him by—I say, when he acutely feels all this, he instinctively falls back from the justice of your criticism, upon your fellow-feeling, your kindness, and your clemency; upon these he begs to press an additional claim, upon the ground of the extreme difficulty of meeting the expectations of this Association, raised, as they have been, by the successful display of talents, learning, and industry, by his predecessors in the same field, all of them blest with "*ingenium par materiæ.*"

A retrospect of the past year would, if it included every thing of importance that has occurred in the medical world, divide itself naturally under two heads,—a history of events, and a description of publications. For the reasons I have before assigned, I shall be under the necessity of making selections from both of these departments, instead of attempting to detail either of them in full; and in making

these selections, you will perceive I shall be more guided and limited by my own slender abilities, than by the importance and number of the subjects of review.

The first subject to which I wish to draw your attention, is the weather which has prevailed in this variable climate since we last met. And here I have to make my acknowledgments to my valued friend, Mr. Addison, of Malvern, for the permission he has kindly given me to make use of the report of his observations, made at Great Malvern; and also to John Williams, Esq., of Pitmaston, near Worcester, for an opportunity afforded me of collating them with his.

1837.—July was a fine hot and dry month, terminated by heavy showers, and a hurricane on the 29th. The barometer was, during the first week, rather below the mean.

In August there was some hot weather during the middle of the month, which was arrested by some severe and general thunder-storms between the 17th and 24th.

The early part of September was wet and chilly, the remainder of the month was dry and fine.

July, August, and September were remarkably healthy throughout the kingdom. The influenza, which prevailed in the early part of the year, seemed to have exhausted the susceptibility to disease amongst all classes, for there was no prevailing epidemic; and in London and elsewhere there was much less fever than usual. In Italy and Sicily, however, the cholera raged during the month of July.

The first and middle parts of the month of October were marked by fine and healthy weather. Towards the latter end of the month, viz., on the 24th and 25th, rain descended copiously, and the temperature declined considerably, with some hail and snow and north-east winds. On the 26th and 27th it was wet and very windy from the west.

November was mild, with occasional rains, and unusual absence of fog for the month.

The month of December was ushered in by some dense fogs with calm, or light north and north-east breezes. Towards the middle of the month strong westwardly winds prevailed, with mild weather. Christmas was one of the most remarkable that has occurred for years; the ground was dry, and the weather was singularly mild and fine, the thermometer reaching 55°, indeed the month was altogether remarkably mild and fine with the exception of the first week. The temperature for the last fortnight varied but little, either by night or day; there were some extensive floods in Yorkshire, but the rain in this neighbourhood was by no means excessive. It occurred at the same period, viz., during the 15th, 16th and 17th.

In October, November, and December, catarrhs, sore-throats, and rheumatism were the prevailing affections; but these were not severe, nor very general. The small-pox broke out in the metropolis in October, and continued to linger there and in many other places through the winter and spring months; but to this subject I shall presently more particularly call your attention.

1838.—January: The first four or five days there

was mild open weather, when the frost set in with fog. Snow fell lightly several times between the 5th and 10th ; the flakes were small, crisp, and distinctly crystalized. Frost, in a most severe form, continued to the end of the month. On the morning of the 20th, the thermometer fell to 7°, but in several places it was below zero. On the 22nd the temperature rose to 42°, but on the following day the frost again set in and continued, with one or two days intermission, to the 24th of February. The Thames was frozen over for three weeks. On the 27th there was a fall of snow, which lay but a very short time.

In January and February the prevailing diseases were pneumonia, pleurisy, and bronchitis, the last often in the severest forms, children and aged people suffering most from it. It was remarked, both in Paris and London, that its severity and prevalence were in exact ratio to the lowness of the thermometer.

March : There was fine, dry, seasonable weather, but with some cold north-east wind, and unattended by any signs of spring.

April was but a continuance of the cold and ungenial weather of March, keeping vegetation in an unusual backward state.

The first week of May was warmer, but the remainder of the month as cold as April, with an almost constant prevalence of north-east winds.

June was warmer, with constantly shifting winds, much rain, and frequent thunder-storms.

The temperature of the present month has been moderately warm, with frequent showers ; the wind chiefly from the south and south-west.

The spring and summer months have been marked by the prevalence of hooping-cough and measles amongst children, and severe inflammatory attacks of the respiratory apparatus amongst adults.

Before I close this part of my Address, I think it will be interesting to present a comparative view of the cold in London and Paris during the extreme cold of January, as it shews that the weather depended upon a widely extended cause, operating with nearly equal intensity over a large surface of the earth. The day of the greatest cold in both London and Paris was the 29th of January, but the minimum temperature was much lower in Paris. In London the thermometer fell on the 29th twenty degrees below the freezing point, but in Paris it fell on the same day thirty-four degrees below it. In London, the highest temperature was eleven degrees below the freezing point. In Paris, the highest temperature the same day was thirty-one degrees below it. In London, the mean temperature of the month was one degree above the freezing point. In Paris, it was eight degrees below it. It will be perceived that the severity of the cold in Paris was greater than in London. It is remarkable, also, that the frost not only commenced on the same day in Paris as in London, but that the cold varied very nearly in the same manner, though in different degrees. The increase of temperature perceptible in London on the 16th, commenced in Paris on the 15th, and was of the same duration. On the 22nd and 23rd, in London, the thermometer rose to 40°, and on the same day, in Paris, it rose forty degrees. This increase of temperature was followed by a sudden

return of the intense frost which continued till the 29th, when the thermometer again rose to 44° in both places, after which the frost returned in both places, and continued with occasional short intervals to the end of February. The mitigating influence of our insular position on the globe is here clearly shewn, and great as must have been the sufferings of the half-fed and half-clothed poor of our great metropolis, how much keener must have been the sufferings of the poor of Paris. Take physic, pomp,

> "Expose yourselves to feel what wretches feel,
> That ye may shake the superflux to them,
> And shew the heavens more just."

The prevalence of small-pox in the metropolis and many parts of the kingdom during the past year, is much to be lamented. It has chiefly visited the habitations of the very poor, a class of persons almost proverbially improvident, and who look but a small distance into the future. Owing to the glorious discovery of Jenner, there have been long intervals for many years between the visitations of small-pox. The absence of the enemy has been followed on the part of the uneducated classes by carelessness and supineness, and it was only when he was at their gates that they flew for protection to the vaccinator.

It does not appear that the number or severity of the cases occurring after vaccination has been great, nor that the whole number attacked with small-pox has been otherwise than inconsiderable, in proportion to the population. In Worcester the

mortality has not exceeded one hundred out of a population of nearly thirty-two thousand; and, as far as I can learn, not one death occurred from this cause after vaccination. I have, however, witnessed one death from a second attack of small-pox; the protective powers of which have been harmfully exaggerated by many in the cow-pox controversy. This fact alone proves the protective influence of vaccination; or what but the benign operation of this safeguard prevented the universal spread of this dreadful scourge?

With regard to cases reported to have occurred after vaccination, we must bear in mind the difficulty of proof of the vaccination having been properly conducted, and the extreme difficulty of getting the poor to attend the vaccinator upon an appointed day, that he may be enabled to satisfy himself of the progress and genuineness of the vesicle. A very common expression in the mouths of the poor is—that they are safe from small-pox, for they have been cut for the cow-pox; a mode of speaking which evidently shews that they consider the protective power to depend upon the simple insertion of the lancet.

Mr. Lawrence, of Cirencester, who formerly vaccinated many thousands, informed me that he secured the return of the parents with their children on the fifth or sixth day of the operation, by taking from them as a security some small article of dress or ornament, which he ticketed with a number, and restored to them upon their subsequent attendance.

Vaccination a second time has become very prevalent during the past year, the object of which

appears to be, to set the minds of the parties operated upon at rest; for should no vesicle be found, the inference is that they are under the protection of their former vaccination; but should the characteristic vesicle appear, then they may congratulate themselves upon being as safe as vaccination can make them, for this epidemic at least.

Gentlemen—When you take into consideration the limited spread and low rate of mortality of the epidemic, and the great neglect of vaccination by the poor in large towns, I think you must agree with me, that the history of small-pox for the past year affords only an additional proof of the value of Jenner's discovery. And here let me call to your mind the fact long since established by Sir Gilbert Blane, that inoculation for the small-pox, although it increased individual security, increased at the same time the mortality from small-pox all over the kingdom, by constantly keeping alive in every city, town, and village, the poison of the disease. It becomes, therefore, exceedingly doubtful, both in a moral and political point of view, whether a man has a right selfishly to protect himself at the risk of the community. If, therefore, the prophylactic powers of the cow-pox were less than what I confidently believe them to be, still let us bear in mind that, whilst we make use of the artificial communication of this trifling complaint as a security against a most appalling disease, we are at the same time doing nothing to endanger the health of our neighbours.

There has prevailed in London for many months a fever of very low type, attended with petechiæ and

tendency to hemorrhages from mucous membranes; and I regret to say that many medical men have fallen victims to it; amongst them Dr. Charles Johnstone, Physician to the Foundling Hospital, universally lamented, as he was rapidly rising in his profession, of which he promised to be a distinguished ornament.

During the last spring, also, agues of the tertian type have re-appeared in many parts of England where they had not for many years been heard of. In some instances in my own neighbourhood, the reappearance appeared to be connected with the hasty conversion of arable into pasture land, and imperfect draining.

A work has been published by Dr. Arnott upon the warming and ventilation of houses, which contains an account of his thermometer stove,—an invention, to use the language of Dr. Barlow, so ingenious, founded on such sound principles, and of such incalculable utility, that its value and importance can hardly be too highly estimated. The disinterestedness which led him to decline all personal advantage from the exercise of his talents, and the liberality with which he has thrown open the manufacture to general competition, with a view to the public being supplied with articles of good quality and moderate price, are highly praiseworthy, and reflects so much credit on himself and on his profession, as to merit due notice in this Retrospect. His forbearance in not seeking to secure his own profits by a patent, has resulted directly from the high sense which he entertains of

the liberality which ought to characterise our profession, and which I believe does attach to it more signally than to any other whatever. I had decided, says Dr. Arnott, not to take a patent, because the stove was originally planned as a means of preventing and curing diseases; purposes for which it will always be important, whatever other advantages be derived from it; and in this country it is usual for members of the medical profession to make an offering at once to the public of any means, for the benefit of the general health, which they may discover or devise, without stipulating for private advantage.

Again, after ascertaining that several distinguished manufacturers were preparing to engage largely in making stoves, and only waiting for his explanatory tract to guide them, he proceeds thus:—"I hope, therefore, that while all who engage in the manufacture may be well requited for their labours, the public will have an offer of abundance and variety, and out of the honourable competition of the makers, obtain stoves of excellent quality and moderate price." The good feeling and high principle here evinced, appear to me worthy of honourable mention, and of the general applause of this Association. This discovery, and the principles discussed in Dr. Arnott's work, have excited the general attention of the profession, and been productive of much needless controversy. A fair statement of the questions at issue will be found in the last number of the *Chronicle of Science*. The advantages of the stove are obvious; the disadvantages either altogether problematical, or easily met and

counteracted. Joyce's stove, for which a patent has been obtained, is altogether unfit for warming inhabited apartments, as there is no provision made in it for getting rid of the carbonic acid generated by the combustion.

There is another invention of as much importance in connection with the treatment of diseases of the lungs, as Dr. Arnott's stove—I mean the respirator. This instrument worn over the mouth will enable a person with delicate lungs to take exercise in the open air during weather in which, without the protection of this instrument, he would be confined to the house. It does not impede or embarrass respiration in the slightest degree, and the patient can converse audibly and with little effort, without removing it from his mouth. I do not think I can insist too much on the incalculable advantages of this discovery ; for, before its invention, the medical practitioner was being constantly placed in the dilemma of either aggravating pulmonary disease by exposure of the patient to vicissitudes of temperature, or else of inducing indigestion and low spirits, by confinement to the house. This depravation of the digestive organs often re-acting upon and increasing the original disease in the chest. Now, however, if the respirator be employed, there will be, even during the winter months, many days in which his patient may enjoy the benefit of exhilarating exercise in the open air.

I am sorry to say that that opprobrious stigma of the New Poor-Law Bill, the heartless farming of the sick poor to the medical bidder, remains still a

dark blot in our statute book. The evils of this system were so crying under the old law, that medical men of experience were astonished, and greatly disappointed at the same baneful system being continued in the new. Is it possible, Gentlemen, that under such a system the poor can be properly attended and supplied with medicines, and the medical man remunerated? Has it not been found to lay open a field for the speculation of many young poor medical adventurers, perhaps strangers to the neighbourhood, and little known to the Guardians themselves, but who accept the office at a very low salary, as a stepping-stone to private practice, and as a means of giving themselves notoriety in the neighbourhood? How often has it been impossible for the medical attendant to afford the supply of the requisite medicines out of his pittance of a salary, and, consequently, how often does he feel himself compelled to send, through the medium of the Guardians, tedious and difficult cases to some neighbouring hospital, thus shifting the labour, responsibility, and expense from his own shoulders who is paid to bear the burthen, merely because the pay is not sufficient? Indeed, the evils of this system are endless, but so obvious that I shall not detain you with farther details.

The question here arises whether this evil can be remedied, and if so, in what way? In my opinion there is only one way of meeting it: each Union should have its own Dispensary, supplied with drugs and medicines at the wholesale prices. At this Dispensary a competent person should reside, to dispense medicines, and who should act as Registrar.

To this Dispensary all prescriptions written for the sick poor should be taken, and each prescription should be written upon a printed formula, which the prescriber can fill up with brief notes of the case. The dispenser should not only send the medicines prescribed, but should also enter every prescription, with its accompanying notes, in a book kept for that purpose. Thus, by an easy reference, at any time, could all the facts be ascertained with regard to the health or sickness of the poor which the Commissioners may require. With regard to the medical attendant, I think the Guardians or Overseers appointed by them, should have it in their power to send the most suitable and convenient to the poor patient, upon the condition of his writing his prescriptions upon and filling up the required formula. There would, I think, be no difficulty in arranging a scale of remuneration to a medical practitioner in proportion to the number of his visits, as the register and the vigilant inspection of the Guardians would always be a sufficient check upon any needless repetition of them, whilst, at the same time, the practitioner would be kept from all temptation of affording an imperfect supply of medicines.

Mr. Serjeant Talfourd's bill to amend the law relating to copyright deserves mention here. The main object of this bill is to extend the interest of an author in the copyright of his works from twenty-eight years, or the duration of his life if it exceeds that term, to a period of sixty years after his death. This is apparently a considerable alteration in the

law, but whether it will produce any extensive change in literary affairs may be doubtful. Its effects will be probably confined to a few cases, but not the less important or less worthy of consideration on account of their rarity. To the honour of our profession, it can with truth be stated that we have had writers whose works were not designed to answer the purpose of a day, but which still continue of imperishable value, and essential parts of every medical library; and there are still living amongst us authors who indeed dedicate their works to that often neglected prince, Posterity, and who, in the fulness of their zeal to advance our noble science, are content to scorn delights, and live laborious days. It is to the productions of such men that Mr. Talfourd's proposed bill will extend what must be considered by every honourable mind as only a fair and just protection. It will also have the beneficial tendency of diminishing the dependance of authors upon the publishers, and, consequently, will offer an inducement to the former to write more for the object of advancing substantial knowledge, than for merely attracting, for a time, the attention of the profession and the public by discussions of merely ephemeral value. There is an amusing attempt upon the part of one of the opponents of Mr. Talfourd's measure, which I met with the other day: the writer's design is to exalt the printer and publisher, and to degrade the author. "In all probability," he says, "the earliest printers had literary assistants, to whom they paid wages, in the same manner as to their assistants in the mechanical department. This was the origin

of authorship among us as a trade, and there is no evidence that these authors set up any claim of right to the printed books, but merely performed their work and obtained their wages." Shades of Sydenham and Morton, of Huxham, Lind, Pringle, and Heberden, are ye come of this kind? The origin of great things is often low.

From dirt and sea-weed whence proud Venice rose.

I think, however, I may venture to mention to every monarch of the type, how proud soever he may be in his inky dominions—

"alta ostia ditis
Et caligantem nigra formidine lucum,"

that, without the help of the press, the spirit of science, of literature, and of art, assisted to civilize the world, and that without them the press would be worthless lumber.

"In the wilds of the north there are insects that prey
On the brains of the elk, till his very last sigh;
But Genius, thy patrons more cruel than they,
First feed on thy brains and then leave thee to die."

Homœopathy.—After the able exposure by our late President, Dr. Boisragon, of this absurd doctrine, and the ludicrous practice of its supporters with which this Society was last year regaled, I shall detain you for only a short time with any remarks upon it. It is obvious that whatever may be the show of theory amongst its professors, the practice is closely allied to "*la medicine expectante*" of the French,—a practice in many cases not attended with failure,

although I can hardly call it being crowned with success. In some acute, and in many chronic diseases, the constitution, if let alone, and the *lædentia* avoided, will right itself; consequently inert treatment in such cases, will have the credit of effecting the cure. How great then the wisdom in these cases of not officiously interfering with and disturbing the kindly processes of nature. Of this well-known law, the homœopathist avails himself; but to procure patients he appeals to the love of the marvellous, indigenous in the brain of man, and then plays upon his inexhaustible credulity. From this two advantages arise: first, he inspires confidence in the supposed remedies, and administers hope, the most safe and most permanent of cordials; and, secondly, insures great caution and regularity, both in diet and regimen, for fear of disturbing the salutiferous movements of his Liliputian army of imponderable doses. In this way cures are not *effected,* but *occur* under the treatment.

This law justifies the regular practitioner in the occasional exhibition of "placebos;" he insures confidence, whilst, with great judgment perhaps, he is doing nothing. There are few patients well-informed enough, or sufficiently tractable under disease, to patiently wait the result of a well-timed pause in treatment. By securing the patient's confidence and tranquillity, while you anchor for awhile under the lee-shore of science, you may avail yourself of the first favourable gale to steer him into the haven of health; but once lose his confidence, or damp his hopes, and with restless impatience he flies from you to some other, who perhaps attacks

the case with inopportune medicines, and precipitates a fatal result.

If legislate not over-much be a sound maxim, I am sure medicate not over-much is often equally sound. Of this truth the great Baillie appears to have been fully aware, for in a posthumous publication he has recorded a proof both of his belief in it, and of his own enduring reverence for the memory of a deceased friend and distinguished physician. "Dr. David Pitcairn," he writes, "said to me once what every physician should have written in letters of gold: 'The last thing a physician learns in the course of his experience, is to know *when to do nothing*, but quietly to wait, and to allow nature and time to have fair play in checking the progress of disease, and gradually restoring the health and strength of the patient.'"

But although, therefore, strictly in accordance with nature's immutable laws, some cases may recover under homœopathic treatment, and extend the popularity of its jugglery, we must not shut our eyes to the real injury its false pretensions are calculated to do to our noble science, or how many deluded and drowning patients must catch at its floating straws, till they sink to rise no more.

Animal Magnetism.—There is another subject to which I will here briefly advert—animal magnetism. This is a very old doctrine revived; for there are hypotheses in medicine, as there are heresies in religion, and scandals in society, which, although you see them quietly inurned again and again, still again and again burst their cerements, and rise

with twenty mortal murders on their crowns to push us from our stools.

Animal magnetism received its first death blow at Paris, in 1784, when a commission of inquiry into its pretensions, (of which the celebrated Franklin was a member,) reported that imagination effected every thing they witnessed, and that magnetism did nothing. "*Constat enim hisce experimentis,*" says the report, "*in medicina fide servari homines.*" The magnetiser on this occasion was M. Deslon. A commission of the Royal Society of Medicine made a report upon it in the same month of the same year: they concluded, after a most careful investigation, that the theory of animal magnetism was a system entirely devoid of proofs, and published this decision. After this, Perkins figured away with his metallic tractors in London, and made many dupes, but no scientific convert; and lastly, in 1825, a third commission of inquiry sat at Paris, at the suggestion of a physician named Foissac, who again consigned it to the tomb of the Capulets.

Notwithstanding all this, lo! in the last year it revives its drooping head, and tricks its beams, and with new spangled ore flames in the forehead of the morning sky. M. Berna challenges inquiry; a most respectable commission sits, who again unanimously sign its death-warrant, but M. Cuvier, in Paris, and Dr. Elliotson, in London, petitioned for a reprieve.

Finally, the arrival of Baron Dupotet in London, and his and Dr. Elliotson's experiments on inmates of the hospital of University College, soon excited, not only the attention of the faculty, but also that

of the public at large, who are always pleased with novelties, and delighted with what is extraordinary or wonderful.

Most of the recorded phenomena would certainly admit of explanation on the ground of the morbid susceptibility of the nerves of the patients selected: and it is now generally admitted that young and delicate females are more easily wrought upon by mesmeric gesticulations than older or more robust subjects, or those of the male sex. Entertaining these views, my scepticism would have remained altogether unshaken had it not been for the appearance of two papers from the pen of Mr. Herbert Mayo, in numbers thirty and thirty-one of the *London Medical Gazette*.* He witnessed the effects produced by Dr. Elliotson upon some patients in the North London Hospital, and published them, with the Doctor's permission. On the different occasions on which Mr. Mayo saw these exhibitions, the patients were *three girls from the ages of thirteen to seventeen.* Mr. Mayo saw these girls at different times, in three different states, at the pleasure of the operator, (as he expresses it,) namely, a rational waking state, a state of coma, and a state of sleep-walking. These different states Mr. Mayo describes: the two last of course can alone be regarded as morbid, and certainly they are so closely allied in their character to the endless vagaries of hysteria, that until we have ascertained every varied form of this Protean malady, we ought to hesitate in classing these eccentricities under any other head of disease. The only puzzling thing in the description of Mr. Mayo,

* 1838.

and which certainly has a tendency to stagger our incredulity, is his statement that these young patients were influenced by Dr. Elliotson's movements, whether they were made before or behind, whether a screen were interposed or not, whether the movements were made near or at the distance of several feet, and even when the patient was entirely ignorant of such movements being made. The morbid states could be conducted through one affected patient to another in contact with her; and in one instance a patient involuntarily made the identical grimaces and distortions of the features which Dr. Elliotson made behind her back, &c. &c. Upon perusing such a narrative we feel inclined to exclaim "*credat Judæus.*" But then, Mr. Herbert Mayo saw these things repeatedly, in the presence of many witnesses. What are we to conclude then? I think probably this, namely, that some few individuals may be found of such a delicate and susceptible tissue of brain and nerves, as to be influenced by as yet unknown causes that would have no effect whatever upon others; as some individuals go into hysterics when there is a cat concealed in the room, of which fact they feel certain from their peculiar feelings; others will predict a thunder storm to a certainty; others swoon when brass candlesticks are introduced into their apartment; while others faint at the odour of flowers, of green peas, or cheese, &c.

One painful duty must always fall to the lot of one who undertakes to look back upon the events of a year, namely, to record the names of those

whom death has taken from amongst us. Just before our last annual meeting the venerable Dr. Carrick, of Bristol, and Dr. Bevan, of Monmouth, died. The former was for many years a distinguished physician at Bristol, and throughout his long and useful life, was ever remarkable for zeal in his profession, and the great liberality of his views upon all subjects. Candour, frankness, and simplicity, were the characteristics of his mind; and he was always conspicuous for his kind and affable manner towards the young and rising members of his profession. When this Association met at Bristol, Dr. Carrick kindly accepted the Presidency, and the ability and good feeling which he displayed upon that gratifying occasion, will never be erased from the minds of the members present, so true is the saying that "*conciliat animos amœnitas et facilitas loquendi.*" I had written thus far when I received the following communication from my friend Dr. Symonds, of Bristol:—"Dr. Carrick became favourably known to the profession in the year 1797, by a *Dissertation on the Chemical and Medical Properties of the Bristol Hotwell Water.* This work contained an account of some very interesting analytical experiments; but it was perhaps rendered still more valuable by some appended observations upon the prevention and treatment of phthisis. As a hospital physician, Dr. Carrick distinguished himself by his unwearied and conscientious discharge of the laborious duties which devolved upon him at the Bristol Infirmary. But his public spirit and active benevolence were never more conspicuous than during the prevalence of cholera in 1832, when, although

arrived at a time of life which might well have excused him from incurring the risks incident to great exertions during such a visitation, he not only took a prominent part in the deliberations of the Board of Health, but attended daily at the bedsides of the patients in the Cholera Hospitals. Dr. Carrick's intellect was marked by a vein of strong good sense, and his attainments were extensive and various. A friendly, honest, and unostentatious disposition, producing the fruits of an upright life, kind actions, and simple and courteous manners, procured for him the affectionate respect of his numerous patients, and of the wide circle which had felt the beneficial influence of his character. In the death of Dr. Carrick, the Association lost one of the heartiest of its well-wishers; although his retirement from practice during the last few years of his life had somewhat diminished his opportunities of promoting the interests of the Association, they were not the less dear to him. Upon few topics was he accustomed to discourse with more zest than upon the improvement of medicine as a *profession,* and upon the means of promoting harmony among its members; he rejoiced in every occasion which brought him into converse with his brethren, and it was a favourite remark of his, that some of the happiest hours of his life had been spent in such intercourse. Nor can this be wondered at by those who are aware that he numbered among his intimate friends such men as Pitcairn and Baillie. The last meeting of the Association attended by Dr. Carrick, was the one held at Oxford, and many now present may

remember the touching emphasis with which, in the Radcliffe Library, he pronounced upon the Association what he denominated 'an old man's blessing.'"

Dr. Bevan was well known to me. His industry, talents, and worth, have endeared his memory amongst a most extensive circle of friends. He commenced his medical career by serving a regular apprenticeship to a surgeon at Swansea. In the year 1799, being then twenty-one years of age, he proceeded to Edinburgh, where he studied three seasons, and took his degree in medicine. In the spring of 1802, he came to London; and he settled at Monmouth in 1803. His inaugural dissertation was on scarlatina, and was highly spoken of at the time. During his stay at Edinburgh he was elected one of the Presidents of the Royal Medical Society. In the year 1814, in consideration of the eminent services which he had rendered to the town and neighbourhood of Monmouth, he was presented with a munificent donation of plate. During the latter part of his life he had to endure some heavy domestic afflictions, which seriously affected his health, and from which, to the day of his death, his delicate frame and highly sensitive mind never entirely rallied. In a conversation which I had with him a short time before his death, he told me that in the early part of his practice he had used mercurial remedies very much in the treatment of chronic disease, and in particular in complicated derangements of the digestive organs, and that he had, like many others, believed that mercury was the sheet anchor in the treatment of these com-

plaints; but that of late years he had gradually come to the conviction that mercury, in these cases, was often needlessly employed, and that he had conducted to a successful issue many cases without the aid of this mineral, and that the cases so cured were less liable to relapse, and less susceptible of the changes of our climate than those cases in which mercurial treatment had been adopted.

Since our last annual meeting we have lost a friendly member of this Association, Wm. Hetling, Esq., Surgeon to the Bristol Infirmary, and Lecturer on Surgery. He was distinguished for zeal and industry in his profession, for his skill as an operating surgeon, and for the great pleasure he took in advancing the minds of his pupils in their studies. It is due to his memory to record in this place his indefatigable exertions in securing friends and enlisting members at the first formation of this Association. The kindness and hospitality also with which he received its members when they met at Clifton should never be forgotten by them.

The past year has also numbered with the dead Christianus J. Nieuwenhuys, M.D., of Amsterdam, our corresponding member for Holland. He was born at Vreeden, in Germany, on the 24th of June, 1775. In 1793 he commenced his medical studies at the University at Munster, and completed them at the University of Jena, in 1797, where he took his degree of Doctor in Medicine, and settled as a physician at Amsterdam in October of the same year. Dr. Nieuwenhuys was in correspondence and on terms of intimacy with several learned men of his time, and he was honoured with diplomas of

various learned Associations, to the Transactions of which his pen had occasionally contributed. He was the author of a *Medical Topography of the City of Amsterdam,* in four volumes, published in 1817, 1818, 1822; also a *Treatise on the dangerous and very general Abuses in Medical Practice,* published in 1810; and a work upon the Asiatic Cholera, and a *Treatise on the Use of the various sorts of Quinine in Remittent and Intermitting Fevers,* published in 1823. He also contributed largely to the *Hippocrates Magazine,* and other periodical works. He died of bronchitis on the 8th of September, 1837. Dr. Nieuwenhuys was a man of active habits, and of a remarkably cheerful disposition; his philanthrophy and numerous virtues caused him to be mourned by many, not only as their physician, but as their best adviser and Christian friend. I am indebted to to my friend, Mr. Hebb, for procuring for me this short narrative of our lamented correspondent.

Within a few days myself and colleagues at the Worcester Infirmary have been deprived by the hand of death of the able assistance of our junior surgeon, Mr. Thomas Carden, a member of this Association. He was carefully educated by his father, an eminent surgeon, whom he succeeded in the Infirmary nine years ago. He was indefatigable in his profession, and in particular in the conscientious discharge of his hospital duties. It may with truth be said of him, that up to the time of his late illness, "*Patrem sequebatur passibus æquis.*"

Anatomy.—In the hundred and thirty-third number

of the *Edinburgh Medical and Surgical Journal*, is a most interesting translation, by Dr. Craigie, of Professor Ehrenberg's paper on the structure of the nervous system in man and animals. As I make no doubt but that all my hearers have perused this valuable communication, I shall content myself with briefly stating the conclusions at which, by the aid of a microscope employed with the most scrupulous caution in avoiding fallacious appearances, the Professor arrives. It is also right to mention here that the greatest credit is due to Dr. Craigie for his accurate translation, and also for his additions and notes, and in particular for the justice he has done to the researches of Sir Everard Home and Mr. Bauer on the same subject.

The Professor made his observations with a microscope with magnifying powers from three hundred and fifty to three hundred and sixty diameters, a degree of enlargement which approaches that which Treviranus had employed in 1816. His reason for excluding the more highly magnifying powers, is the inferior degree of clearness and definiteness in the inner figure of the same. The higher powers, however, he frequently employed to test the accuracy of his observations. He describes as thus discovered by him :—

1. A set of tubes which present, at definite intervals, globular or spheroidal expansions, so as to resemble a string of beads, which do not touch each other, but have a short communicating space interposed between the beads. To these tubes he gives the name of varicose, from their resemblance to the varices of a vein ; and jointed or articulated tubes,

because of their slight resemblance to a set of joints. These tubes, which present to the microscope the appearance of parallel fibres, he shows, by various proofs, to have an internal cavity, and to contain a peculiar matter, to which he assigns the name and qualities of nervous fluid. They are confined chiefly to the white matter of the brain and spinal chord.

2. A set of tubes, straight and uniform, without the alternate spheroidal enlargements, also hollow, and to which he applies the name of simple cylindrical tubes. These are found chiefly in the nervous trunks and chords. They are generally larger and coarser than the articulated tubes; but in certain points the latter are found to pass into the former, by gradually losing their bead-like enlargements. These tubes he represents as being distinguished from the cerebral jointed tubes by containing, in their interior, a viscid, white, but less transparent matter, to which he applies the name of medullary.

3. A substance consisting partly of very minute fine grains, with some coarse-grained matter disseminated, as is said in the language of mineralogy, through the fine-grained matter. The latter is entirely confined to the grey matter of the convoluted surface of the brain, or the laminated surface of the cerebellum.

Now these discoveries of Ehrenberg happen at this time to derive additional importance from the spirit of investigation which now actuates medical philosophers with regard to the functions of the nervous system, for as it would be unphilosophical not to infer diversity of function where we meet with such diversity of structure, it is not improbable

that out of this minute anatomical knowledge some new and important laws of action may be deduced; but at present nothing can with certainty be inferred. With regard to the physiology of the spinal marrow, I can refer you with confidence to a most elaborate article in one of the best conducted journals in Europe* In this article the able writer gives a brief outline of our knowledge of the nervous system of animals, beginning with the earliest distinct trace of it in the radiata and articulata, and ending with its most perfect development in the vertebrata and in man; and then proceeds to investigate the respective claims, as discoverers in this department, of Bellingeri, Bell, Magendie, Flourens, Fodera, Mayo, Grainger, Hall, and Müller, whilst the labours of their predecessors, Whytt, John Hunter, and Sir Gilbert Blane are not forgotten. I must confess that the article, into the details of which it would be impossible here to enter, is both ably and fairly written, and particularly deserving of attentive perusal.

Physiology.—There are many now present who must remember with delight the animated manner in which Dr. Marshall Hall last year kindly laid before the Association a candid exposition of his views relating to some functions of the nervous system of animals. To this subject I shall here briefly call your attention. It appears that at the end of the year 1832, Dr. Marshall Hall read a paper before the Zoological Society a paper in which he announced as a dis-

* No. x of the *British and Foreign Medical Review*, edited by Drs. Forbes and Conolly.

covery, a peculiar function of the medulla spinalis, namely, that by which on the application of stimuli to sensitive nerves, subsequent motions of the muscles near or remote from the part excited take place, for which the presence of the brain is not necessary.

That this principle is dependent upon the spinal marrow was proved by the removal of it, when motions no longer took place upon the application of stimulants, unless they were applied directly to motor nerves. In the same paper he shewed the influence of this law, which he called the *reflex function,* upon the action of the sphincters, respiration, swallowing, and many other important actions of life.

Professor Müller, and Dr. Graves, of Dublin, in the following year, made similar observations, but it does not appear that either of these learned individuals were aware of Dr. Marshall Hall's prior announcement of the facts. In the mean time, I humbly suggest to Dr. Marshall Hall the extreme caution required in physiological induction, and that structure can never be demonstrated from function, although the analogy of functions may successfully guide the knife of the anatomist to new discoveries. At present we must be content to reconcile the above interesting phenomena with our existing knowledge of the anatomy of the nervous system, and not to speak positively of the existence of a new system of nerves until they have been rendered visible to something more than the "mind's eye."

Segnius irritant animos demissa per aurem
Quam quæ sunt oculis subjecta fidelibus.

Embryology, or that department of anatomy which traces the gradual development of an animal (more particularly of man), from the early stage of intra-uterine existence until it arrives at its perfect formation, is a branch of anatomy almost unknown in this country, although during the last twenty years it has been investigated with great success on the Continent.

It is to the labours of the German and French anatomists, more especially to those of Meckel and Tiedemann, of Geoffroy St. Hilaire and Serres, that we are indebted for almost all we know upon this interesting subject. Their researches have made known to us the wonderful truth, that the intra-uterine being passes through a series of successive changes of existence, beginning with the most simple state, and gradually advancing to the more complicated and perfect. They have shewn us that the human embryo at the earliest period of its evolution, is analogous to some of the simplest members of the zoophytic class; being nothing save a mere vesicle or globule, filled with a glairy fluid, and exhibiting no appearance of variety of parts; and that, gradually, organ after organ, and system after system, are developed, and more and more completely formed; each successive change representing as it were the structure and formation of an animal higher and higher in the scale of organization:—for example, the nervous system in the very young embryo is nearly analogous to that in the more simple invertebrata; it next assumes an arrangement similar to that we find in the insect and mollusca tribes; and as its structure becomes more and more complex, it

may be compared in succession to the organization of the same system in fishes, reptiles, birds, and the lower mammalia, until at length it arrives at that perfect development which exists only in the human species. The same law applies to the gradual development of the heart in the fœtus. It is also worthy of remark, that these investigations have established the law by which the symmetry of organic beings is preserved; namely, that they are built from the circumference to the centre, and that there is a middle line to be found where the architecture is completed—the key-stone that binds and shuts. A failure, therefore, in the formation of the embryo more frequently occurs in this middle line than elsewhere, and thus a large number of monstrosities are reduced under a general law, and satisfactorily explained; such as a division of the ossa palati, a deficiency of the velum pendulum, hair-lip, a continuance of the sagittal suture to the ossa nasi, spina bifida, a disjunction of the ossa pubis, a cornuted or fissured uterus, a deficiency in the linea alba, which sometimes, in the hypogastric region, includes an absence of the anterior portion of the vesica urinalis, and occasions many of the confusions of sexual development which have been classed under the different varieties of hermaphrodites.

The *Cyclopædia of Anatomy and Physiology*, under the able editorship of Dr. Robert B. Todd, proceeds

* See *Philosophie Anatomique* and *Histoire des Anomalies de l'Organization, par* M. St. Hilaire; and also a *Sketch of the Comparative Anatomy of the Nervous System, with Remarks on its Development in the Human Embryo,* by Mr. John Anderson, M.E.S.

prosperously, and is worthy, in every way, of the high scientific character of its contributors, whose names alone are sufficient to recommend the work to the profession at large. In the department of comparative anatomy, we have articles from the pens of Dr. Milne Edwards, Mr. Owen, M. Adouin, and M. Frederick Cuvier; in physiology and animal chemistry, articles from Dr. Alison, Dr. Bostock, and Mr. Brande; and in the department of human anatomy, most able contributions from Dr. Todd, Dr. Alcock, Dr. Jacob, Mr. Grainger, and Mr. Partridge. Where all is so well done it would be invidious to particularize, but I must say of comparative anatomy, it certainly promises to be the best compendium ever published in this country.

The fifth part of that laborious undertaking, Dr. Copeland's *Dictionary of Practical Medicine,* has appeared. In it the articles on hypochondriasis and hysteria are written with the pen of a master,—indeed I may say most *unfairly* written, for the able author has not left an opportunity for another to put in a word.

You are, no doubt, all of you well acquainted with the researches of Professor Magnus on the blood, so favourably noticed by Müller, in his Physiology. I allude to the translation of the third edition, second part. He appears to have established that the blood, both arterial and venous, contains a notable quantity of gas, a mixture of carbonic acid, oxygen, and azote, varying in proportion in the two kinds of blood, oxygen abounding most in arterial blood, carbonic acid in venous blood: Müller is satisfied of his accuracy, and yet I

believe he has fallen somehow into error. The subject is, physiologically, of vast importance. Dr. John Davy has been employed in investigating it with the greatest care, and the conclusion he has arrived at is, that commonly, both in arterial and venous blood, there is a minute quantity of carbonic acid, capable of being extricated by the air pump. He has sought in vain for any other gas; he has not been able to detect a trace of either oxygen or azote extricable by removal of atmospheric pressure, but he believes that oxygen is absorbed by blood in the lungs, and that it exists in arterial blood, and that this blood owes its peculiar vital properties to the oxygen it contains, in a certain manner combined, not so loosely that it can be pumped out, not so intimately that it cannot enter into new combinations. Dr. John Davy has given to the Royal Society a paper containing the details of the experiments of which the above are the results.

The past year has been distinguished by a new edition of John Hunter's works, with notes by J. F. Palmer, senior surgeon to the St. George's and St. James's Dispensaries. With regard to the writings of this distinguished physiological discoverer, I have always said to those advanced in our science, *nocturnâ versate manu versate diurnâ,* but they are not adapted for the early study of the incipient pupil. His vast mind contemplated rearing a large building of physiological and pathological science, based on the induction of a host of particular facts, all carefully arranged, and classed according to their respective values; but alas! *Vita brevis spem nos vetat inchoare longam;* and, notwithstanding his

years of incessant labour, his fabric was left for others to complete. In this country, I may say in Europe, he was in advance of all his contemporaries, by many of whom he was as little comprehended as the great Bacon was by his.

> From the long errors of the way
> In which our wandering predecessors went,
> And, like th' old Hebrews, many years did stray
> In deserts but of small extent,—
> Bacon, like Moses, led us forth at last;
> The barren wilderness he past,
> Did on the very border stand
> Of the blest promised land,
> And from the mountain's top of his exalted wit,
> Saw it himself, and shewed us it.

From this Baconian height Hunter descended, with a firm and decided step, into the fair fields of our noble science, and, with an indefatigable industry, and an almost intuitive sagacity, accomplished, in his short career, wonders. I shall not here dwell upon a very painful subject, the delinquency of an individual now no more; but it is not improbable that much valuable matter of Hunter's is lost for ever to science, by the treachery and cupidity of one man.

There is a peculiarity in Hunter's style of writing, which betrays the mode in which his mind often worked in accomplishing his discoveries. This peculiarity arises from his confounding *efficient* with *final* causes. Of this he apears to be altogether unconscious himself; but, like a sound natural theologian, he gives an animus to the great Contriver and Preserver of all things, and often felicitously makes a discovery in consequence of

his preconception of the *design* of a series of phenomena. This is one of the causes which make his writings difficult reading for the young beginner. Mr. Palmer, in this edition, has executed his task well, and his notes do great credit both to his science and industry.

Here is, I think, the proper place to notice, in connexion with John Hunter's researches, a work just published by a man of kindred mind; I mean a Treatise on Inflammation by the venerable Doctor Macartney, of Dublin. It contains the theory and practice respecting the subject of inflammation, which he had taught for many years in his admirable lectures on surgery. This publication did not become necessary until he had resigned his professorship in the University of Dublin. The delay has been attended with the great advantage of enabling him to verify and improve his early opinions, by a larger experience, and by the successful practice of his pupils, who are now, settled in every part of the United Kingdom, and throughout our Colonies. Whatever the profession may think of the doctrines Dr. Macartney may have advanced on the subject of inflammation, the practice founded on them is at present established too extensively, and confirmed by the experience of too many individuals, to admit of controversy. Indeed, the great merit of this valuable treatise is, that it is so eminently practical. It abounds in original observations of facts; and the whole subject is arranged in most lucid order, and treated in a style remarkable for simplicity and clearness.

One doctrine, I think, the learned author has triumphantly established, by a most extensive induction of particulars, namely, that inflammation is so far from being necessary to the reparation of injured parts, that in proportion as it exists the latter is impeded, retarded, or prevented. This is practically illustrated by a beautiful coloured engraving of a wounded finger, in which case the injury was produced by a blow with a heavy mallet, which laid it open from one end to the other: the soothing treatment of first steaming the hand with the vapour of water, and then applying cold water dressing was adopted. The wound went on towards a cure in the manner which Dr. Macartney describes as the modelling or approximating process. No granulations were formed, nor pus generated. The edges of the wound came together, and presented the appearance of a red smooth fissure. At this time the patient unfortunately put a piece of adhesive plaster round the middle of the finger, and continued the water dressing to the remainder. In two days after the wound opened under the plaster. The skin inflamed around the part, granulations shot up in that part of the wound, and pus was secreted. He now returned to the water dressing, under which the granulations which had formed faded, the secretion of pus declined, the inflammation which had been induced by the plaster subsided, and the wound healed without farther trouble.

The chapter on the proximate cause of inflammation is particularly interesting, as, in consequence of the very nature of the inquiry, the writer is treading on disputed ground the whole way.

There is great ambiguity in the scholastic phrase proximate cause. All that we know of many diseases, is that they are attended with a certain collection of symptoms; and to the collection of symptoms, we assign the name of a disease, as fever, for instance. But symptoms, separately or collectively taken, are only signs of some morbid change or changes. Now when the pathologist has discovered what these latter are, he has discovered what the real disease is, and not the proximate cause of it.

But the phenomena of disease are developed in succession, and you have to ascertain the order in which they are linked together; well, you discover, you think, the first link, and announce that to be the proximate cause; but, as has been ably remarked by our distinguished President, Dr. Barlow, there must be a state of the system worthy of investigation, prior even to this, and which, if discovered, would usurp the place of the proximate cause. The phrase proximate cause is, therefore, still used by different medical writers, in each of these three senses.

The sense in which Dr. Macartney employs the term, is nearly identical with "exciting cause," as will appear from the following extract:—"As we have sufficient grounds for assuming that an organic sense of injury or danger, modified according to the causes that produce it, necessarily precedes inflammation, it is reasonable to conclude that this is the *proximate* or *essential* cause of inflammation; and the opinion seems to be confirmed, &c.;" so that it is the organic sense of injury or danger that *rouses*

the series of actions entitled inflammatory, this organic sense itself having been first awakened by some constitutional or local cause.

I must confess myself a convert to the author's views, developed in this chapter, as to the part the arteries take in the economy of the circulation, and also to the justness of his conclusion that the arteries, particularly the capillaries, have an active power of modifying their tone so as to dilate themselves in consequence of certain impressions transmitted through their nerves.

This work is of such inestimable value to the profession, that ages after Malden's simple memorial of it shall have perished, Macartney will be read with pleasure, and remembered with gratitude,—as the history of Lucceius has been lost in the stream of time, whilst the works of Cicero, whose consulate he commemorated, still continue to instruct and delight us.

Pathology and Morbid Anatomy.—Dr. Carswell has now concluded his invaluable illustrations of pathological anatomy.

Fasciculus eleventh commences the illustrations of what he very correctly denominates analogous tissues; that is to say, such morbid growths as conform in structure to the tissues of healthy parts. The analagous tissues, including blood-vessel, are arranged in the following manner:—

Vascular, including erectile.
Cellular, including fat.
Serous; mucous; cutaneous.
Cuticular, including hair and nails.
Fibrous; fibro-cartilaginous.
Cartilaginous; osseous.

In this order the different morbid tissues are described with the pen of a master, and the coloured engravings illustrating them are, as usual, of surpassing correctness and beauty.

Fasciculus the twelfth, which concludes the work, is devoted to the subject of inflammation, as it occurs in the several tissues and organs, and is of equal merit with its predecessors.

The assistance that this splendid and comprehensive work of Dr. Carswell has already afforded to the progress of pathological anatomy in this country is very great. The time will no doubt arrive when the diagnosis during the life of the patients of many morbid charges will be rendered comparatively easy to what it now is. The great desideratum in almost all works on this subject, is an enumeration of symptoms indicative during life more or less of the particular organic change or lesion which may be going on, or is established. I have also little doubt that time will enable us to connect certain physical appearances with determinate chemical composition of morbid secretions, and thus wonderfully facilitate and expedite clinical diagnosis, and improve practice. In particular I would mention alvine and urinary discharges. Uroscopy was for so many centuries in the hands of quacks and pretenders that it fell into unmerited contempt with regular practitioners; but "*fas est et ab hoste doceri:*" and it is due to Dr. Prout to say, that he has led the way in substituting the certainty of science for the vague pretensions of ignorance and imposture. Let us follow this bright example, and a new and strong light will eventually

be thrown both on the nature and the treatment of diseases.

Professor Müller, in a paper read before the Royal Academy of Sciences at Berlin, took a view of the minute structure and chemical composition of tumors, and the connexion of these with certain local signs and general symptoms in the living body, so as to facilitate their classification and diagnosis.

Of *fatty* tumours he describes *three* varieties—Lipoma, steatoma, and choleostoma. Next comes: 2. Gelatinous tumour. 3. Albuminous fibrous tumour. 4. Tendinous fibrous tumour. 5. Enchondroma. 6. Angionema. Of malignant tumours he describes seven, under the common head of Carcinoma:—Carcinoma reticulare; carcinoma fibrosum; carcinoma alveolare; carcinoma medullare; carcinoma hyalinum; carcinoma phyllodes; carcinoma melanodes. This able outline filled up by the labours of others will go far towards removing the great difficulty which attends these cases—the difficulty of connecting the internal structure and chemical composition of tumours, with their outward and visible signs and mode of progress in the living body, without which we cannot attain, with regard to them, either accuracy of diagnosis or confidence in practice.

I think it was Bishop Horne who apologised for a long letter, by saying at the close of it that he had not time to write a shorter one.

To combine brevity with perspicuity and comprehensiveness is a very arduous undertaking, and one in which few are qualified to excel, and,

indeed, what few are honest enough to endeavour to do in these book-making times; yet such is the merit of Dr. Marshall Hall in his *Principles of the Theory and Practice of Medicine.* Dr. Craigie's *Elements of the Practice of Physic,* of which I have only seen the first volume, is more discursive, and perhaps better suited as a class-book; but Dr. Hall's is a compendium to set professors thinking, and a summary from which materials for new reflections may be extensively taken. There is one part of Dr. Hall's work which I think calls for particular notice and praise, namely, that part in which he lays down rules for blood-letting. As by this time all the profession must be satisfied of the justness of his conclusions on this head, I shall not detain you by entering upon them here at large, but shall simply state that one source of fallacy with regard to the intolerance of bleeding in some individuals, appears to have escaped the learned doctor's notice. Dr. Perceval, of Manchester, some years ago, called the attention of the medical world to it, namely, a great horror of the operation itself —a horror insuperable—and which, in consequence of Dr. Perceval's treating it with neglect, in one instance in his practice, proved instantaneously fatal.

I have repeatedly met with instances, in very timid females, in which although *undoubted* inflammatory symptoms demanded the use of the lancet, the horror of the operation entirely prevented the abstraction of the requisite quantity of blood.

Messrs. Trousseau and Belloc had been for some time engaged in investigating the diseases of the larynx, when the following questions were proposed

by the Royal Academy of Medicine of Paris:— "What ought to be understood by phthisis laryngea? What are its organic alterations, causes, species, terminations, and treatment?" These were answered in a memoir which received the approbation of the Academy, and which was afterwards published by Messrs. Trousseau and Belloc.* In this able publication there are two observations of great importance in practice, to which I beg leave to direct your attention. The first is, that the absence of redness in membranes after death is no proof of their not having been red with the true signs of inflammation during life; and, consequently, that laryngeal œdema, which so often proves fatal, is seldom a primary affection, however pale the mucous membrane may appear, but almost always the consequence of inflammation. The other observation is that, independently of any syphilitic disease, ulceration of the larynx scarcely ever occurs unconnected with tubercular phthisis. To these two particulars I avail myself of this opportunity of directing your attention; but the entire work is a masterpiece of research, method, and true philosophical modesty.

Upon the subject of auscultation, as applied to the investigation of diseases of the chest, I know not how to speak sufficiently highly of Dr. Latham's published Lectures. His arrangement of his subject is judicious; his style remarkably simple, perspicuous, and elegant; his classification of the various morbid sounds such as to greatly facilitate

* *Tràité Pratique de la Phthisie Laryngée, &c.* By A. Trousseau and H. Belloc. Paris, 1837.

their study; and the whole subject is aptly illustrated by practical examples.

I must here also direct your attention to an admirable Lecture of M. Louis, extracted by the *Medical Gazette* for August, 1837, from the *Presse Medicale*. M. Louis confines himself to the auscultation of the respiratory organs, and after describing the respiratory sounds, and those of the voice in a healthy subject, he proceeds to the consideration of the morbid sounds. He has, however, omitted to point out the difference between the normal sounds of infants and those of adults. In describing the alterations produced by disease, he first lays before us the modifications, absence, and alterations of the respiratory sound; secondly, the various modifications of the resonance of the voice; and, lastly, a lucid description of the various kinds of rhonchi or *râles*, as the French call them. All this is done with his characteristic minuteness and accuracy. It is an admirable compendium of this interesting branch of medical science, as far as it goes, and deserving of attentive perusal. There is, however, one paragraph upon which I shall make a brief remark. He says, "In opposition to Laennec it is now allowed that the naked ear perceives sounds as well as when aided by the stethoscope; indeed it often happens that it distinguishes shades of sound which had escaped it when assisted by this instrument. The cases in which we ought to prefer *mediate* auscultation are very rare, and it is often necessary to have recourse to *im*mediate auscultation to determine, with clearness, what would otherwise be obscure."

Now this may, for the most part, be true; but mediate auscultation can never be superceded by the naked ear, for three reasons. First, there are few females whose delicacy would not be offended by such a mode of exploration. Secondly, there are many points to which the ear could not be conveniently applied, as, for instance, between, or beneath, or immediately above large mammæ; or immediately beneath the clavicle; or high up in the axillary region. And, lastly, if I may so express myself, you cannot topographize your inquiry with the same precision with the naked ear as with the stethoscope, since the eyes must be averted to apply the ear; whereas you may employ your eyes most advantageously in placing the instrument accurately upon the successive points of the chest to be explored. Besides, in the cases of *small* children, the use of a *small* stethoscope for minute exploration is indispensible.

The Drs. Bright and Addison also have, in the second part of their *Elements of Practical Medicine*, given a good general outline of stethoscopic signs in diseases of the chest. This part of this very useful work is perspicuously written, and affords the student a good introduction to the further study of the subject at the bedside, and in the more detailed treatises of other writers.

The attentive study of Dr. Stokes' works* on this department of practice, will amply repay the reader. In the composition of his work he has kept two great objects steadily in view. Of these,

* *A Treatise on the Diagnosis and Treatment of Diseases of the Chest, &c.*, part 1. By William Stokes, M.D., &c. &c. Dublin.

the first is the close connexion of the study of physical signs with that of symptoms, so as to illustrate their mutual bearing in diagnosis ; and in the next place, he has simplified the subject as much as possible, assuming that his reader is familiar with the groundwork of the subject as originally taught by Laennec, and more recently investigated in the works of Forbes, Williams, and Clark.

Let me urge upon the members of this Association the paramount importance of acquiring by practice, dexterity in applying this invaluable instrument, and facility in interpreting its language, for the information which it conveys to the well-informed practitioner, amounts to the advantage of his seeing with his ear.

Insanity.—In the *Medical Gazette* for August, 1837, there is published a report of cases treated in the Lunatic Asylum of Aberdeen, by J. Macrobin, M.D.

The proportion of those lunatics whose disease had been induced by inebriety, independently of any hereditary taint, is large ; and this I believe corresponds with the observations of others conversant with this class of patients. Dr. Halloran some years ago published an interesting work upon insanity, in which, as the report of the cases included those admitted within the space of twenty years,—that is, from 1798 to 1808,—the large proportion of lunatics from inebriety is abundantly obvious—a melancholy evidence of the great share which the abuse of alcohol has in inducing cerebral disease. The habit of daily intoxication, if persisted in for a few months, seldom fails to create an irresistible

impatience to meet the return of that hour which would appear to excuse indulgence, and to constitute the moments most essential to instant happiness. This for a time is satisfied by the unrestrained enjoyment of a favourite beverage within post-meridian hours. By degrees, however, this periodical return undergoes an exacerbation twice in twenty-four hours, till at length all restraint is set aside; the natural inclination for solid food ceases to return, unless when excited by such condiments as are suited to a depraved appetite. The countenance now bespeaks a dreary waste both of mind and body. The temper, which hitherto partook of the grateful endearments of social intercourse, becomes dark, irritable, and suspicious. Insatiable thirst affords a pretext for incessant returns to the only means now left to relieve it, till, finally nature, worn down by this excessive abuse, struggles to maintain the unequal contest by the intervention of a febrile paroxysm. When the disease has proceeded so far as to induce a permanent derangement of the functions of the liver, there can be but faint expectation of subduing its inveteracy. The residue of existence is reduced to the shreds of what has been; the lucid interval no longer cheers the vacant eye, and the besotted mind sinks into torpid indifference as to passing events.

Lunatics of this class are particularly liable to sudden strokes of apoplexy or palsy, and frequently to effusions of water within the cavities of the thorax and abdomen. Shortly before death they sometimes recover their intellects, with a horrible

consciousness of their approaching dissolution, and remorse for their illspent lives.

There is one circumstance connected with these cases in a medico-legal point of view, to which I beg leave for a moment to call your attention.

There are individuals who have no self-control with regard to indulgence in spirituous liquours. The temptation to them is irresistible, and, unfortunately for them, a small quantity not only inebriates them, but makes them decided maniacs. Persons afflicted with this unfortunate propensity, often squander their fortunes, to the ruin of themselves and families, and are almost always in a mixed state of inebriety and madness. If kept from drinking, they are rational and well-conducted, but not otherwise; yet, as the law now stands, there is the greatest difficulty thrown in the way of placing such patients permanently under the bodily and moral restraints their symptoms require.

Suppose, for instance, a writ *de lunatico inquirendo* in a case of this kind to be issued. The subject of inquiry is either left at liberty, or put under restraint by friends during the sitting of the commissioners. If he be at liberty, he is pronounced simply drunk, upon the evidence, and if he be under restraint, and therefore sober, he is pronounced sane. Yet this man, at liberty, is an injury to himself, his property, and to all dependent upon him, and as incapable and as unfit for the management of his own affairs as the most inveterate lunatic of sober habits. Most of those whom I have the honour of addressing, must have experienced the legal difficulty which I have stated as connected with these disagreeable cases.

Surgical Observations on Tumours, with Cases and Operations. By John C. Warren, M.D., Professor of Anatomy and Surgery in Harward University, and Surgeon of the Massachussetts General Hospital. Boston: 1837.

The most interesting part both to the physician and surgeon of this valuable and laborious undertaking is, where Dr. Warren considers the arguments for and against the removal of scirrhous or cancerous tumour of the mamma. It is well known that upon this point much doubt has been entertained by many surgeons; and as years roll on, and the results of operations on breasts, truly known to be scirrhous, are accurately recorded, the objections against the propriety of operating seem to increase in number and in force. In the cases given by Dr. Warren, there were traces of disease in the internal organs so extensive, that he infers that these, and not the disease of the external organs, were the principal points deserving the attention of the surgeons. "In some instances," he says, "when the breast had been removed, there were in fact no remains of external disease, while of the internal organs scarcely one appeared to have escaped its ravages."

Dr. Warren entertains the supposition that this extensive disease may be transmitted from the breast by absorption or nervous sympathy; but it is much more probable that the breast and internal organs are affected simultaneously or successively by the same general cause.*

* See *Edinburgh Medical and Surgical Journal*, No. 133, *p.* 506.

The author, notwithstanding the practical inference which seems to flow from this fact of operating rarely if ever in cases of scirrhus or carcinoma of the breast, is favourable nevertheless to the performance of the operation. He says, indeed, that one case in three has been cured without relapse. "When, therefore," he continues, "the tumour is not large, has not been of long standing, is not ulcerated, and there are no signs of constitutional affection, it is best to try an experiment, which, notwithstanding its painfulness, is generally desirable and satisfactory to the patient."

His classfication of tumours of the breast is as follows :—

1. Scrofulous tumour. 2. Chronic mammary tumour. 3. Irritable mammary tumour. 4. Hydatidal tumour. 5. Adipose tumour. 6. Cartilaginous and osseous tumour. 7. Scirrho-cancer. 8. Fungus hæmatodes.

I shall detain you only with his accurate description of scirrho-cancer of the mamma. "The period of life at which this occurs is most commonly between forty and fifty. Frequently some of the relatives of the affected persons are cancerous. The tumour is at first of a small size, increasing with variable rapidity ; is found more frequently in the axillary part of the breast ; is very hard, moveable at first, afterwards less so ; is accompanied with lancinating pains, sometimes but not always severe ; increases gradually, contracts adhesions with the skin, produces distortion and drawing in of the nipple ; ultimately causes a redness of the skin, followed by ulceration and the discharge of a fetid

matter; the edges of the ulcer turn out; bleedings occur, sometimes profuse from the ulceration of the vessels. It is accompanied with enlargement of the axillary glands, swelling of the arm, difficulty of breathing, cough, abdominal pains, dropsy of the abdomen and thorax, and fragility of the bones. The patient dies, not from the cancer of the breast, but from the disease of the internal organs."

No description, Gentlemen, of this terrible disease can be more correct than this, which renders it difficult to believe that the same pen could have written it that so sanguinely recommends the operation for the extirpation of the tumor from the mamma.

The Cyclopædia of Practical Surgery, edited by William B. Costello, M.D., is meeting with deserved success. The article on amputation, from the joint pens of Drs. T. King and Costello, is deserving of particular attention, as well as a most masterly essay on morbid anatomy, from the pen of Dr. Hodgkin, an extract from the conclusion of which I have here much pleasure in quoting:—"It is not as the means of acquiring reputation, however merited, that the advantages of morbid anatomy may be most strongly urged, but rather as one of those essential requisites, without which no one can be expected to be able to discharge his professional duties with satisfaction to the public, or with an easy conscience to himself. It lends to physiology that assistance for which no artificial method of inquiry can supply an adequate substitute. As the only means of throwing certain light on internal diseases, it is both the basis and the test of diagnosis; and those who neglect this

test of their diagnostic powers, are blindly groping in the dark, whether they are conscious of their situation or not. Morbid anatomy does not merely enlighten us with respect to those cases we have unsuccessfully endeavoured to combat, it makes us aware of dangers we must be on our guard to avert, and it points out the path which nature takes to reduce to a permanent and comparatively healthy or unimportant condition those derangements which do not admit of perfect restoration, a course in which nature may be aided, but in which she cannot be opposed with impunity."

Obstetrics.—Case of delivery of a fœtus through the abdominal parietes, by Dr. Harris, of Clarksville, Virginia, communicated to the *American Journal of Medical Sciences*, May, 1837.

A negro woman, thirty-five years of age, was attacked with flooding and signs of incipient labour, but the os and cervix uteri remained obstinately rigid, and the pain and tenderness of the abdomen very great. At the end of four days the mammæ became flaccid, the motion of the child was no longer felt, the liquor amnii had been discharged, and a highly fetid discharge soon confirmed the death of the fœtus. After twenty days of continued suffering, a very soft fluctuating tumour appeared to the right of the linea alba a little below the umbilicus; to this large emollient poultices were applied for a few days, during which time the tumour gradually enlarged. Dr. Harris, in consultation with Dr. Singleton, then agreed upon opening the tumour, through which they extracted a putrid fœtus, apparently between the seventh and eighth month.

This case, I believe, stands alone in the records of medicine; for, although extra-uterine fœtuses have made their way to the surface in a similar manner, I am not aware of the history of any other case in which the inflamed uterus formed adhesions with the abdominal parietes, followed by ulcerative absorption, and producing a direct communication with the cavity of the uterus.

Dr. Denman had observed that he thought for many years that convulsions only occurred where the head presented, but experience has proved that they sometimes occur in preternatural presentations. During seven years' residence at the Dublin Lying-in Hospital, Dr. Collins had only one case of convulsions with preternatural presentation. There was not one case during Dr. Clarke's residence, and Dr. Labatt stated the same fact in his lectures, while master of the hospital. In these three different periods there were 48,379 women delivered; so that from this we may infer, where the presentation is preternatural, there is little cause to dread the occurrence of convulsions.* This remarkable fact only serves, in my opinion, to increase the obscurity in which the cause of this horrible disease is involved.

A work has been published by Dr. Montgomery, Vice-President and Professor of Midwifery in the King and Queen's College of Physicians in Ireland, of great value to the profession. It is entitled *An Exposition of the Signs and Symptoms of Preg-*

* See *a Practical Treatise on Midwifery, containing the result of* 16,654 *births, occurring in the Dublin Lying-in Hospital, during a period of seven years, commencing November,* 1826. By Robert Collins, M.D., late Master of the Institution.

nancy, the period of Human Gestation, and the Signs of Delivery. This work is an amplification of a very able article on the signs of pregnancy and delivery, written by the same author for the *Cyclopædia of Practical Medicine.* A most accurate description is given in this valuable treatise of the changes observable in the breasts and areolæ, beautifully illustrated by a series of coloured engravings, representing those changes in a first pregnancy from the third month up to the time of delivery. These are admirably executed. The writer places great confidence in the condition of the areolæ, as a sign of pregnancy; in which opinion he is supported by Professor Hamilton, of Edinburgh, who has lately communicated to the public, as the result of forty years investigation of the subject, his entire confidence in this mark of pregnancy. Upon a subject to which Dr. Bardsley drew your attention last year, Dr. Montgomery has some observations at page 126; he notices the blueish tint of the vagina which Dr. Klüge, of Berlin, and M. Jacquemin, of Paris, declare to be a sure sign of pregnancy. In this opinion they are confirmed by Dr. Sommer and M. Duchatelet. Dr. Montgomery says that his present experience does not enable him to speak decidedly upon this point, because the opportunities afforded of ocular examination of the vagina in pregnant women are comparatively rare, and when they do occur, it is almost always on account of some disease of the parts which changes their natural appearance; but I feel bound to state that nothing within my observation contradicts the accuracy of the sign under consideration; on the contrary, I

found it present, in a greater or lesser degree, in a few cases which I recently examined expressly for the purpose, where pregnancy undoubtedly existed. Dr. Montgomery says that he observed this purple hue of the mucous membrane of the vagina in a female at the time of menstruation; and also mentions a well-known fact that the same membrane assumes a very dark colour in some of the lower animals when they are in a state fit for intercourse with the male. Although, for many reasons, this test cannot be of frequent application, still, as the discolouration is observable as early as the fourth week of pregnancy, at which early period we have no other satisfactory means of discovering the existence of that condition, it might, occasionally, under peculiar circumstances, be resorted to with propriety and advantage. My limits will not allow me to dwell longer here upon this interesting volume, but it ought to be in the library of every member of our profession.

Prophylactics.—A medical man seldom shews more sagacity than in those instances in which he detects unsuspected sources of disease; and surely nothing can be more gratifying to him than to be able to remove or obviate them when detected. Lead had for a long time been productive of disease in the cider districts of this country, before the publication of Sir George Baker's paper on the colica pictonum drew the attention of the profession to the subject. Every now and then we find whole families under the baneful influence of this insidious poison, without their being at all aware of it, and upon investigation, the introduction of the lead into the

system can frequently be traced to the hurtful custom of repairing the cider mills with that metal. We are indebted to the late ingenious Dr. Maculloch for pointing out what very limited sources of terrestrial malaria may seriously affect the health of a district. Since his time, the attention of medical men has been alive to this subject; and the cause of fever in a single house, or in a cluster of houses, has often been traced to the neglect of a drain, mud-well, or cesspool, or to the accumulation of stagnant water in the neighbourhood. Ague has reappeared, after an absence of many years, even in elevated situations, at the end of very dry summers, in consequence of the partial drying of ponds near the abodes of the inhabitants.

I have been led into these observations in consequence of the detection of a practice during the past year, which appears to have prevailed to an alarming extent; I mean the use of arsenic in the manufacture of certain kinds of candles. By the report of a Committee of the Westminster Medical Society, it is clearly shewn that candles containing arsenic are sold in large quantities; that they are called by a variety of names, German wax-lights, Venetian candles, &c., &c.; that they are represented by the vendors as being very superior to tallow; that they have platted wicks, and require no snuffing. The quantity of arsenious acid is found to vary considerably in different candles, and different parts of the same candle; but from 10 to eighteen grains have been obtained from a pound weight of the same candles. Comparative experiments were instituted by the Committee, and care-

fully conducted, in which birds, rabbits, and guinea pigs, were exposed under similar circumstances to the influence of the combustion of the arsenious candles, and common tallow and wax lights, by which it appeared that the former were highly injurious to animal life. During the week that the experiments were performing, seven birds which had been exposed to the vapours of the arsenious candles died, whilst the birds which had been exposed to the vapour of the pure candles were in as perfect health at the end of the week as they were at the commencement. The medical profession and the public at large are greatly indebted to the discoverers of this dangerous fraud; and I now particularly draw the attention of this meeting to it, that we may be aware of such an enemy being in the field. *Verbum sat sapientibus.*

Therapeutics.—The past year has been signalized by the appearance of two works on the subject of mercury in the cure of syphilis; one from the pen of Dr. Colles, of Dublin, and the other from M. Devergie, a Frenchman, who has found an accurate translator in Mr. John Sinclair Innes.

The French writer is a decided anti-mercurialist, and claims for his countrymen the credit of having first tried the experiment of curing lues without mercury, forgetting the labours, or not knowing them, of Thompson, Ferguson, Rose, Hennen, and Guthrie, &c., who preceded the French in this experimental inquiry at least nine years.

The views and practice of M. Devergie cannot with safety be entertained; at the same time, it

must be allowed that two advantages have arisen from the researches of the anti-mercurialists. They have afforded us in many instances, which was much wanted, a natural history of the uninterrupted disease, and they have shewn that in many instances patients will recover from their existing symptoms without the intervention of mercury. Further, perhaps, it may be said, that they have in some instances shewn which symptoms are of mercurial and which of syphilitic origin. Of this value, it must be confessed, their experiments have been to our scientific art and to mankind.

But Dr. Colles, whose experience extends through a long lapse of years, and whose judgment appears to be as sound as his observation is accurate; who also knows all that has been attempted without mercury, in this country and elsewhere, has arrived, I think, at a sound practical conclusion, namely, that in a majority of instances a course of mercury, adapted to the particular case, and never carried to the extent, intentionally, of inducing mercurial disease, is requisite to the successful treatment of syphilis.

The correct and elaborate descriptions of its various forms and stages in Dr. Colles' work, my limits will not allow me now to enter upon; but I shall take the liberty of adding, I trust, not an unuseful summary of my own, the result of many year's practice.

The venereal poison may attack a constitution perfectly vigorous, one that indicates no predisposition to organic disease, and one that in particular is free from any scrofulous taint; but, Gentlemen, I

should say that this is a rare occurrence. If we consult the records of our experience, we find that in this variable and humid climate the peculiar habit of scrofula is nine times out of ten at the root of the innumerable chronic affections we are called upon to contend with.

This being the case, it is obvious how wary we ought to be in the use of mercury for any stage of lues, and in particular for its primary symptoms. Once light up scrofulous action, which an incautious exhibition, or an injudicious management of mercury may easily do, and you are at once in a wood, and know not where its "wandering mazes end;" for you have, to perplex you, not only a hybrid between the diseases of syphilis and mercury, but a more disastrous mixture of syphilis, mercury, and scrofula. The primary syphilitic sore, in all its various appearances, has a tendency to spread, with sloughing base, for the first few days after the appearance of ulceration; then if perfect rest, antiphlogistic diet and regimen, and local *cleanliness* and *coolness* be enjoined and practised, the base of the sore cleans, healthy granulations appear, and cicatrization takes place, leaving, however, in a large number of instances, a palpable hardness. A very mild, what is commonly called an alterative course of blue pill, with strict diet and regimen, if taken for the time that this hardness continues, or until it be dissipated, will secure the patient from any secondary symptoms; but should the constitutional symptoms contra-indicate the use of mercury in the first instance, it is safer to leave it alone altogether, and wait for the chance of secondary symptoms, which perhaps may

never occur, but which, if they should shew themselves, will yield more readily to a mild course of mercury than they would do if mercury had been employed in the early stages of the disease. There is one more important fact which I am anxious to take this opportunity of impressing upon my kind hearers. It is this,—that mercury, in this disease, must never be tampered with, for the constitution, by badly conducted courses of mercury, frequently repeated, becomes so habituated to it, that the remedy at last loses its power of arresting syphilis, in whatever form it may appear.

Professor Graves, of Dublin, has used, with great success, tartar emetic and opium in the advanced stage of the worst forms of spotted typhus, attended with urgent cerebral symptoms,—an interesting account of which is given in his Sixteenth Clinical Lecture, published in the *London Medical Gazette*, for July, 1837.

Statistics.—Under this head I strongly recommend to the attentive study of my hearers, the profound, laborious, and comprehensive work of Monsieur A. Quetelet, *Sur l'homme et le developpement de ses facultes, &c.*, a masterly analysis of which has been published in the *Edinburgh Medical and Surgical Journal*, No. 133. Before the appearance (says the Reviewer,) of M. Quetelet's papers, the laws regulating the birth, development, and death of man, had been studied neither as a whole, nor in reference to the mode in which they re-act on each other. Inquiries, more or less complete, into some of these laws, results deduced from isolated

facts, and theories frequently founded on single observations, constituted almost all the materials of the science of man; and though the influence of age, sex, occupation, climate, and season, on the number of births and deaths had been carefully investigated, no attempt had been made, on a large scale, to ascertain the laws regulating the increase of the height and weight of man, the development of his powers, the sensibility of his organs, and his other physical faculties. The age at which these faculties attained their maximum of energy, that at which they begin to decline, their values in respect to the different epochs of life, the mode in which they are influenced, and the causes by which they are modified, remained undetermined; and little attention had been paid to the study of the progressive development of the moral and intellectual part of man, to the influence exercised over it by the body, or over the latter by the mind.

The numerous difficult problems that must be solved before any satisfactory conclusion on such subjects can be formed, will require the industry of another age at least; but, in the mean time, we may avail ourselves of the materials which M. Quetelet has with such ability and perseverance collected for the purpose.

The following table, which M. Quetelet gives from Caspar, is particularly interesting, as it affords us some notion of the expectancy of life in different professions; at the same time it must be confessed that it is calculated to arouse medical men to a solemn sense of the short time allotted to *them* in particular for the discharge of their earthly duties,

as the awful fact appears to be that those whose whole labour it is to lengthen the lives of others are thereby shortening their own.

Professions.	No. of 100 who reach 70 years of age.
Theologians	42
Agriculturists and Foresters	40
Superior Clerks	35
Merchants and Manufacturers	35
Military Men	32
Inferior Clerks	32
Advocates	29
Artists	28
Teachers and Professors	27
Medical Men	24

Gentlemen, after this gloomy *exposé*, I can only say to each of you, as a stimulus to your exertions,

Carpe diem quam minime credulus postero.

Medical Jurisprudence.—In a paper written by Mr. Taylor, in the fourth number of the *Guy's Hospital Reports*, Mr. Marsh's apparatus for the detection of minute quantities of arsenious acid, as well as of the soluble salts of the metal, is spoken of with high approbation. By this apparatus, hydrogen gas, in its nascent state, is passed through the fluid containing the arsenical preparation. Upon burning the arseniuretted hydrogen so obtained, and holding a clean plate of glass over the flame, there is formed thereon a stain of metallic arsenic. In respect to its delicacy, Mr. Taylor says that he has obtained sublimates from one-hundredth of a grain in 45,000 parts of water.

Medical Charities.—Suggestions for establishing convalescent retreats on the sea-coast, as subser-

vient to the Hospitals and other Medical Charities of large towns; by John Roberton, one of the Surgeons to the Manchester Lying-in Hospital.*

"For many years," he says, "it has appeared to me that a considerable number of the patients who apply to our public charities, are in a condition to derive little, and sometimes no benefit whatever from the most skilful medical treatment. They are suffering under some form of chronic disease, which in its nature may or may not be curable. While under treatment, poverty compels the continued pursuit of their laborious occupations; their residence in, perhaps, a majority of instances, is in a cellar, and their food is the same as before, or becomes of a worse quality, owing to their being less able to earn a living. It is hardly necessary to remark that patients of this sort are in want of something besides medicine: they are in want of such a change in external condition, as shall remove them from under the influence of those depressing circumstances which, if not the sole causes of their complaints, tend to aggravate and increase them; and which, supposing their continuance, must hinder speedy or even ultimate recovery.

Without, in the slightest degree, underrating the importance and value of the *materia medica,* when skilfully employed for the cure of disease, I cannot conceal from myself the fact that medicine, in a variety of cases, comes merely in aid of other means, and deservedly ranks as secondary and inferior to these. A man (I choose a familiar illustration,)

* *Edinburgh Medical and Surgical Journal,* No. 133, Article 3.

of delicate constitution, of sedentary occupation, residing in a confined situation, and who has to provide for a large family, becomes affected with chronic indigestion,—anxiety, unsuitable diet, unremitting labour, combined with the want of even the occasional enjoyment of a pure atmosphere, aggravate the disease; he is admitted on the lists of a Dispensary; his sallow desponding countenance speedily reveals the nature of his malady; he is forthwith put under treatment; for a time he appears to be obtaining relief; but these signs of amendment are of short continuance; after a few weeks they have vanished. The patient returns to his last, his needle, or his loom; and not less, to his cares, his long hours, his close confinement, and vegetable diet; and, in due time, his name appears on the Dispensary list as one of the "irregular," an appellation which has the merit of saving the credit of the physician, by throwing the blame of failure upon the patient. In this case it will surely be admitted that something besides medicine is wanted.

The following is a case which is far from uncommon:—The mother of a family suffers a miscarriage, which is attended with hemorrhage, which leaves her in a state of abject weakness, a prey to a train of nervous symptoms. What is the fate of this poor woman? She attends her surgeon week after week, with a straw-coloured melancholy visage, a hurried circulation, headache, feeble digestion, swelled ankles, and other indications of debility. The surgeon does his best; but he knows that his patient, notwithstanding her weakness, has daily to undergo the drudgery of doing, single-handed, the

domestic and other duties required for her family; that her residence is a cellar, or some other equally unpropitious dwelling, in a confined situation; that her diet, which ought to be better than common, is the ordinary diet of a poor family, and altogether unsuited to the sickly appetite of such an invalid. After long-continued persevering but fruitless efforts to benefit his patient, the surgeon is perhaps fortunate enough to obtain for her a Southport charity-ticket, with which she is immediately dispatched to the watering-place of that name, for the limited term of three weeks. Here a total change in her circumstances takes place; she breathes a pure bracing atmosphere, has clean airy lodgings, plenty of wholesome food, and no other duties to perform than those arising from the care of her person, and her daily walks. And what, generally speaking, is the consequence? Her appetite and spirits return, begin to return perhaps the very day she arrives; and when, on the expiration of her term, she returns to her surgeon, he finds her perfectly or nearly recovered, and cannot fail to perceive, is forced to admit, that in chronic diseases, coupled with the already-mentioned adverse circumstances of a personal kind, a temporary change of condition, such as this removal produces, has incomparably more influence in the restoration of health than the most skilful medical treatment in thrice the time without it. I will give another example of still more frequent occurrence:—A weakly woman after a lingering confinement in child-bed, exposed to constant toil in the discharge of her domestic duties, and probably on scanty fare, has felt it her duty to suckle a vigor-

ous infant for ten, twelve, or fifteen months. The train of symptoms following this practice, under such circumstances, is extremely distressing; the digestive organs are seriously impaired, there is paleness of countenance, headache, giddiness, and singing in the ears, distressing flatulence, a capricious and feeble appetite, irregularity in the alvine functions, a frequent sense of faintness, severe pains across the loins, general muscular debility, particularly of the lower extremities, irritability of temper, and mental despondency. In such a case what can medicine effect without other means? absolutely little or nothing. I may venture to say that the scientific practitioner has the least reliance, in such cases, on the unaided power of the *materia medica*. Without neglecting medicine he has recourse to other helps. They are the ignorant only who appeal under all circumstances to the laboratory. Many are the forms of disease which require for their cure a change of personal condition; but the patients may be included under three heads:—first, convalescents from acute diseases or severe operations, in whom delicacy of constitution, together with poverty, retards recovery; secondly, chronic cases, whose cure is retarded by personal circumstances; and, lastly, chronic cases, in their nature curable, but which are rendered incurable by the peculiar condition and locality of the subjects of them."

Mr. Roberton here proposes his humane plan of convalescent retreats for the poor in the neighbourhood of large towns, and, where possible, upon the coast, (for the particulars of which, I must refer you to the original paper,) and he concludes by

reminding the affluent that they have a great number of retreats appropriated for their sole use and benefit in the various watering places of the kingdom.

I must say, Gentlemen, that whether we regard the elegance and truth of the descriptions in this able paper, or the fine feelings of a benevolent heart which it betrays, it equally calls for our admiration; and I sincerely trust that it will not fail to attract the attention of the public at large, as a more necessary and more humane appeal has never yet been made to the rich in behalf of the poor.

I must now, Gentlemen, bring this *olla podrida, "nostri farrago libelli"* to a close, hoping you will make allowance for the meagreness of some parts, and the shallowness of others; but if I have caused a variety of interesting subjects to pass before you in rapid succession, one end of this agreeable meeting has been answered, and in taking leave of you I shall only detain you with a few remarks, called for from the increased zeal with which the science of medicine is now being cultivated, and the mode in which that science is chiefly being advanced.

Medicine in all its departments, it should never be forgotten, is a practical art—an art next to divine; it is the art of preventing disease, of curing disease, of alleviating suffering, and of prolonging life. To the improvement of this most useful and humane art, the science of medicine in all its branches, and the study of all the collateral sciences which combine to illuminate our path, should be made subservient. The art should never merge in the science, but science should ever aim at the improvement of the art.

Now there is something so extremely fascinating in the inductive and numerical system so successfully pursued in the Parisian schools by distinguished teachers, that there is a fear lest their numerous pupils, from their eagerness to confirm or refute a doctrine, may become too anxious for experimental treatment, or even for what have been delicately termed necroscopies, in which case there is certainly a chance of the main end of their art being for a time lost sight of. That the zeal of science may carry a person so far the following fact will prove :— A few years ago a French practitioner communicated to M. Bayle, the Editor of *La Revue Medicale,* the statement of a case of flooding in the last months of pregnancy, admitted into a Hospital under his care. He said that it occured to him that this would be a favourable opportunity of ascertaining, by auscultation, how long the heart of the fœtus would continue to beat under such circumstances ; and he consequently proceeded, with the greatest *sang froid,* to apply the stethoscope for that purpose. He ascertained the fact, and then, with extraordinary *naiveté,* concludes his communication thus :—" *On devient ainsi dire spectateur méme des derniers moments de l'enfant.*"

Unfortunately, Gentlemen, those who devote themselves to the science, have little leisure for the art, and are, therefore, frequently excluded from the professional emoluments enjoyed by less deep but more active practitioners, and, consequently, from the observation of disease in the various ranks of society. Let us endeavour, as far as we can, to avoid either extreme; let us, whilst we justly and

humbly consider ourselves as the continual pupils of nature, whilst we observe her with accuracy, and interrogate her with the most scrupulous caution, ever remember the awful responsibility attached to our calling, and the great object of all our studies and all our labours, namely, to diminish the woes and to add to the happiness and comfort of our fellow-creatures, and to retard, by our skill, the approach of that last sleep out of which we, with our patients, must finally awake to give an account of our stewardship.

PART II.

MEDICAL TOPOGRAPHY.

ARTICLE II.

MEDICAL TOPOGRAPHY OF COPENHAGEN.

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The character of disease in different regions is influenced and modified by innumerable circumstances, depending upon the climate, the nature of the country, whether the surface is plain or mountainous, high or low, whether it consists of calcareous or other soil, or of turfy layers, abounding in lakes or not, upon the manner of living of the inhabitants, their character and temperament, upon the institutions, laws, and form of government, &c., &c.; and in the same manner as the nature of the diseases differs according to all such influences, so also are the action of the remedies and the modes of treatment seen to vary. It being my intention, in these pages, to acquaint my readers with the reigning diseases and methods of treatment in Denmark, and particularly in Copenhagen, I think it necessary, in the first place, to give some account of the geographical situation of the town, its climate, and all the other conditions that may tend to elucidate the subject, and be of interest to the medical public generally.

SITUATION OF COPENHAGEN, BUILDINGS, &C.

Copenhagen is situated between the North and Baltic Seas, on the eastern coast of the island of Zealand. The Sound which unites the two seas, and separates Zealand from Skania, is here as broad as twenty English miles. The town is situated about two hundred miles further north than Hamburgh, and about two hundred and fifty miles more towards the south than St. Petersburgh and Stockholm. On the other side of the town is a fresh-water lake which was formerly much larger and broader than it now is; at present the lake is divided by roads into three,—St. Torgens, the Peblinge, and Sorte-Dams lakes. Copenhagen is, in consequence, entirely surrounded by water, and may be considered an island, its whole circumference being 126,000 yards, and as several circumstances prove that it was formerly much smaller, it is undoubtedly, for the most part, built upon made ground, taken from the sea and the adjacent fresh-water lakes. In later times more of the site of the city has, by means of dikes and fences, been taken from the sea and transformed into islands. Copenhagen was, in the tenth century, an inconsiderable fishing hamlet, but has, from the time of Bishop Absalon, in the thirteenth century, increased yearly, as well in size and population, as in beauty; and, from the rebuilding of the burnt houses after the bombardment by the English in 1807, it may now be considered one of the finest cities in Europe. The number of inhabitants at present amounts to 119,292.

The town is built upon a flat soil, consisting of sand and clay, as is, for the most part, the case with towns built on ground taken from the sea; in some places the soil is mixed with softer earth.

The greater number of the streets are straight and broad, and some of them are of considerable length; but in the centre of the town there are several crooked and small streets, which, however, of late have been improved as much as possible. Straight and broad streets are beyond all doubt of great importance in populous cities, by maintaining the circulation of the air and cleanliness, by dissipating and removing noxious vapours and miasmata, and in this manner preventing diseases, which, under other circumstances, would certainly occur. This is an advantage which is not enjoyed by old places, and only to be found in those of later date, as formerly, in the founding of towns, only the convenience of trade and the rights of property were taken into consideration; but several conflagrations with which Copenhagen has been visited, (in 1728, 1795, and by the bombardment of the English in 1807,) have necessarily tended to improve the city in this respect.

There are twelve large places or squares in Copenhagen, some of them of very considerable size; and there is besides, in the middle of the town, a large and beautiful public garden, belonging to the Royal Palace of Rosenberg, which in summer serves as a promenade for the higher classes.

The houses of Copenhagen are mostly high, consisting, commonly, of three or four, seldom of five stories. They are all furnished with cellars, in

which the poorer classes and shopkeepers live, but which are certainly too deep, being deprived of sufficient light, in general very damp, and consequently unhealthy, inconveniences which are still more increased by the numerous families that inhabit them. The houses in general are provided with too many windows, and these being seldom made from sufficiently dry wood, the wind, rain, and snow, particularly the first, are rarely kept out, so that there is always a strong cross current in all the rooms, and many diseases of cold arise from this source. The rooms of the poor are small and low; those of the opulent, on the contrary, are large and airy, and loftier than in Paris or London. They are for the greater part of the year heated by stoves, usually of iron, from which the smoke is carried through iron pipes to the chimney, and as these stoves necessarily produce a draught when they are heated, they serve as perpetual ventilators, removing the more or less corrupted air of the room, which is changed for fresh by the draught through the windows and the doors. But by this constant current of air the stoves are very quickly cooled, so that a fresh supply of wood or turf is perpetually required in order to keep up the heat, which is, for the most part, carried away through the pipes up the chimney without being of any use. The stoves, and also the kitchens, are very liable to smoke.

The entries of the houses are generally small, the staircases airy, and corresponding in size to the buildings. The bricks used in the building of the houses are very small and porous, absorb humidity

from the atmosphere, and do not long resist the action of the weather; the lime by which the bricks are united being likewise very loose, and the wood-work slight, unseasoned, and liable to rapid decay, we have plenty of open floors and doors, which, added to the loose window-frames, give rise to much gout and rheumatism. It is likewise too often the case that the inhabitants of Copenhagen occupy new houses, the walls of which have not been exposed to the action of the sun and heat for a sufficient length of time, and, consequently, exhale much baneful dampness.

The *ramparts* round the town are not so high as to prevent the access of free air and the beneficial influence of the winds. The *suburbs*, of which there are three, consist of only one large street each, with houses only two or three stories high, and commonly without cellars, but furnished with large beautiful gardens. The space between the suburbs is occupied with large commons, which serve for military exercises, and for the pasture of cows and horses.

Although one-half of the city is surrounded by the ocean, yet as there is no tide, it of course experiences neither the advantages nor the inconveniencies resulting from the ebb and flow of the water. Nor does any river pass through the town, as is the case with most other large cities of Europe, though several fresh-water lakes and excellent springs are found in the neighbourhood of Copenhagen. The environs are exceedingly flat, almost without any hills at all; towards the south and south-west no wood is found within twenty or

more English miles, but on the north and north-west are very large and luxuriant woods, within from five to ten miles, as *Charlottenland*, the *Deer Park*, *Lyngby*, *Frideriksdal*, &c. There are no marshes which might corrupt the air near the town, so that, upon the whole, the situation of Copenhagen makes it a very healthy place of residence.

CLIMATE.

The principal characteristic quality of the climate of Copenhagen is *changeableness*, in all the seasons of the year, as to heat and cold, dryness and humidity; *windy* weather being the only thing in which it is constant. In summer, as well as in winter, the thermometer rises and falls often six, eight, or still more degrees in the day; warm days and cold nights are likewise very common. But as Copenhagen is situated close to the sea, which is always colder than the air in the summer, and warmer in the winter, we have rarely any intense heat or any very considerable cold, the former seldom exceeding twenty-two degrees, of Reaumur, in the hottest time of the year, (at the end of July and the beginning of August,) and the latter scarcely ever seven degrees in the coldest season, (in the month of January.) The annual mean temperature is 6°50, R.; the mean of the seasons is, winter, 0,32; spring, +5.20; summer, +13.86; and autumn, +7.60. The winters of the last ten years in particular have been uncommonly mild, and the frosty days do not in general amount to more than three weeks in the

whole year, frost rarely lasting more than three or four days at once, and being frequently interrupted by thaw and foggy weather. The month of March is often dry and warm, but April and May are cold. The leaves of the trees do not show themselves before the end of May or the beginning of June, have again lost their bright green colour at the end of July, and generally fall in the beginning of September. The month of September is usually the most agreeable one of the year, the sky being clear and cloudless, and the temperature neither cold nor warm, (from 12° to 14°, R.) The stoves are commonly heated as early as the end of October.

The usual height of the barometer is $27\frac{1}{2}$ inches; the lowest is 25; and the highest 29; but on account of the characteristic unsteadiness of the climate, it is not uncommon for it to rise and fall one inch or more the same day, the changes being greater and more frequent in the winter than in the summer. In the months of November and January the barometer is at the lowest, in consequence of the greater humidity of these months.

The climate of Copenhagen and of all Denmark is very humid, rainy weather being frequent in all seasons, but particularly prevailing in the months of October, November, and December, which are not less foggy here than in London. The greatest number of rainy days is, according to observations instituted during many years, 193, and the least 113. The dryest months are March and April; the most humid, (next to October and November and the first half of December,) July and August; the average annual number of rainy days was, in the course

of thirty years, 134. In the six first months of the year we have commonly less rain than in the six last; and of foggy days, there are 36 more in the winter than in the summer. According to observations made at our Observatory, twenty inches is the average annual fall of rain. *Snow* falls often in an exceedingly large quantity, particularly in January and February, and being preceded by frost, brings sledging along with it; but in the last six winters very little snow has fallen, the same being the case last winter, (1836–37,) although so much snow fell during that period in England. *Hail* is much less frequent than snow, but is observed at all seasons, chiefly however in the spring and summer; it is seldom so heavy as to do much damage to the vegetation, but it cools the air very quickly. *Hoar frost* and *glazed frost* are frequently observed in the winter. *Thunder* and *lightning* are not very common, and do not happen more than from five to eight times in the year. According to observations instituted at the Astronomical Observatory during a period of twenty-six years, the greatest number of days when it has thundered have been twenty-five in a year, and the least, six.

The *winds,* which, as before remarked, favour us liberally, giving us a respite of only two or three days during the whole year, more commonly blow from the *west* and *south,* than from the *east* and *north,* the *south-west* wind being consequently the most frequent, the *south-east* the rarest. Professor Schouw has very carefully collected 56,000 observations, instituted during fifty years, on the winds, from which the following conclusions are to be

drawn: the predominance of the westerly winds is very different in the different seasons, and the easterly winds bear, in this respect, the following proportions to the westerly ones:—

In the winter as 10 to 12
In the summer as 10 to 25
In the spring as 10 to 12
In the autumn as 10 to 16

Of forty-one *winters*, the westerly winds have predominated in twenty-two, the easterly in sixteen, in three they have been in equal proportions.

Of forty-six *summers*, there is not a single one in which the easterly winds have predominated, or been in equal proportion to the westerly ones.

Of forty-six *springs*, the westerly winds have predominated in twenty-nine, the easterly ones in fifteen, in two years they were in equal proportion.

Of forty-five *autumns*, the westerly winds have predominated in thirty-eight, the easterly ones in five, in two the proportion was equal.

The westerly winds are in the winter commonly from the south-west; in the summer mostly west or north-west. As Professor Schouw found the same proportions to prevail throughout Denmark, he was led to examine the same subject in the rest of northern Europe. In England, also, the westerly winds predominate over the easterly ones, and this still more than in Denmark, as, for instance, in London, Doncaster, and Keswick, as seventeen to ten. The southerly winds predominate likewise there over the northerly ones. Also in England the predominance is greater in summer than in the winter, the westerly winds being in the winter more

south-west, in the summer more west or north-west. In Holland and France the same proportion is observed: and eight different towns in Germany have given the same result: even in St. Petersburgh the westerly winds predominate over the easterly ones, although the proportion is not so high (thirteen to ten); east and west are there more frequent than south and north, the northerly winds much more frequent than the southerly ones, and the proportion of the easterly and westerly winds about the same in summer and winter. In *Sweden* and *Norway* the proportions are almost the same as in Denmark; though in Sweden somewhat approaching to the Russian proportion.

The following general conclusions may be deduced as to the prevalence of the winds in the north of Europe, between the latitudes of 50° and 60°:—

1. The westerly winds prevail over the easterly ones.

2. This predominance decreases from the Atlantic Ocean towards the Continent: it is as 10 to 17 in London; 10 to 16 in Amsterdam; 10 to 15 in Copenhagen; 10 to 14 in Stockholm; and 10 to 13 in St. Petersburgh.

3. The westerly winds become more southerly towards the Atlantic Ocean, and more due west or even northerly towards the Continent. In Great Britain, Holland, and France, the wind is most frequently south-west; in Denmark and in most parts of Germany, west; in Moscow, north-west; and in St. Petersburgh and Stockholm, north.

4. In the summer the westerly winds predominate

much more over the easterly ones than in the winter and in the spring, but this rule does not appear to hold in the most eastern parts of Europe. (in Russia.)

5. The westerly winds are more southerly in the winter, and more due west or northerly in the summer.

The south and south-west winds are loaded with moisture, and are for the most part, in the winter, accompanied with thaw and foggy weather; the cold and dry northerly and easterly winds do not agree with the inhabitants of Copenhagen, and if they last long, never fail to bring diseases and epidemics along with them. During humid and foggy weather, when west or south-west winds prevail, slight catarrhs and colds exist; but during clear and frosty weather, when we have northerly or easterly winds, dangerous inflammations and fevers prevail, which do not end before the return of foggy and rainy weather.

Although we have much windy weather, yet true hurricanes are very rare; from the year 1747, to the present time, we have only had nine, mostly from the south-west and north-west. The last hurricane in the north of Europe, in November, 1836, which caused so much devastation in England, was not at all observed in Copenhagen. Shortly before and after the equinox the wind is, however, in general very stormy.

Upon the whole, the climate of Copenhagen cannot certainly be called an agreeable one, and the eternal changes of the atmosphere are undoubtedly among the most frequent causes of the reigning diseases.

PHYSICAL AND MENTAL CONSTITUTION.

The Danes are in general not strongly built, and they are mostly of moderate height, nor are they, with the exception of shopkeepers, much inclined to corpulency. For the most part they have light coloured hair, and light blue eyes, and the face is commonly pale. Cripples are much rarer in Copenhagen than in other large cities, and are forbidden by law from entering public places and walks in order to excite compassion and beg alms. The females are distinguished by beauty of face and complexion, but do not in general possess a fine figure, and have a very disagreeable gait.

As to *mental* constitution, the Danes, upon the whole, may be considered an intellectual people, but belonging to that class in which all the faculties are equally developed without any great preponderance of any one in particular. The head is of moderate size, and they are what may be termed clever rather than possessed of any great powers of mind. In this respect they are more like the Germans, whom they also resemble in possessing faculties better adapted for the cultivation of the sciences than for that of the arts. Thus, though many truly scientific men are found amongst us, there are but few good poets, painters, musicians, artizans, &c.; the great poet *Oehlensenläger*, and the sculptor *Thorvaldsen*, are, however, amongst our countrymen. In assiduity and application, the Danes likewise resemble the Germans. They possess more judgment than imagination, and think more than invent, and are, in general, a grave people.

PUBLIC AND PRIVATE AMUSEMENTS.

It has been already remarked that the Danes are to be considered, upon the whole, a grave people, and that the mass of the inhabitants of Copenhagen, like the English, seek their recreation more at the domestic fireside, than in public places. Among the higher and middle classes there is much mutual hospitality, and, during the whole winter, friends and acquaintances meet at larger or smaller parties. In the summer-time it is customary for the wealthy and opulent to live in country houses from five to eight miles distant from the town, where the friends and acquaintances of the resident families always find a hospitable welcome. Those who have not the means, or who are prevented from living in the country by business in town, make frequent excursions, particularly on Sundays, to one or other of the fine woods in the neighbourhood of Copenhagen.

There are few *public* amusements in Copenhagen; we have only one public theatre, which gives daily representations during the winter-time, and even this is so small, that it does not contain more than two thousand people, and, consequently, is unable to afford room whenever a good play is given. It is very badly ventilated, and, when crowded, is on this account, very noxious to the health. In the suburbs there are two smaller play-houses of wood, but in these German plays are only occasionally represented, and twice in the week equestrian or acrobatic representations are given by strolling companies. There are no public balls at present,

and masquerades and concerts are but seldom frequented, and when we add the occasional *sledging* and *skating* of young people in winter when the weather allows it, we have enumerated nearly all the public amusements to be found in Copenhagen. It is no wonder then that the lower classes, being entirely without cheap public amusements in the winter, resort to beer and brandy-houses, and vulgar dancing-rooms, where all sorts of licentiousness prevail. A popular festival is observed in the summer, from the 18th of June to the 18th of July, in the Deer Park, six English miles from the town, in which tents with refreshments are pitched, and all sorts of jugglers and buffoons divert the lower people. Thither throng, particularly on Sundays, all classes from the town, no family failing to visit that place at least once in the year.

FOOD AND MANNER OF LIVING.

Nature has furnished Denmark and its capital with every thing necessary to the support of life and health, and has only denied sundry articles of food which luxury has made a necessity, and which, consequently, are imported from foreign countries.

The principal food of the inhabitants of Copenhagen, certainly the best adapted for a humid and cold climate, is *butcher's meat; beef* is most commonly eaten by all classes, it being not only of the best quality, but also the cheapest meat. Good strong broth is first prepared from it, and then the meat itself is served up, and eaten with some sort of vegetables, particularly potatos, or horseradish,

mixed with the broth. The meat is also often roasted and eaten with potatos, when no broth is previously prepared from it, but it is seldom so juicy or so nourishing as in England. It is likewise often seasoned with salt, and in this state is preserved during a whole winter, the best sort being brought to us from Holstein, from which province also smoked beef, which is frequently eaten here, is sent. *Veal* is excellent in Copenhagen, the calf being commonly fed four or six weeks before being sent to town ; the price of it is, however, so high, that it only comes upon the tables of the more opulent classes. *Lamb* and *mutton* are also sometimes very good, and, being very cheap, are eaten more than beef in the summer time. The *pork* is likewise good and cheap, but is chiefly eaten by the poor, either boiled or roasted. *Bacon* is a delicacy for the more opulent. As Zealand and the adjacent islands are well-wooded, *venison* (of roebucks and deer,) and *hares* are a common food in Copenhagen, but only amongst the opulent classes, the price being rather high. *Rabbits* are, on the contrary, extremely rare. *Wild fowls,* as, for instance, fieldfares, partridges, snipes, &c., are not uncommon, but very dear, and some sorts are only got from Norway and Sweden. Of *geese, ducks, turkeys,* and *fowls,* we have a great abundance. Although Zealand is surrounded by the sea, and the town has several fresh-water lakes in the vicinity, *fish,* with the exception of cod and herrings is neither in great plenty nor of the best quality. The *herrings,* which are caught on several parts of the Danish coast in the greatest quantity,

are eaten fresh, pickled, or salted and dried; the *Gadus Callarias* (cod), is excellent, and is brought to the town from the northern coast of Zealand; it is considered unwholesome only in the months of May, June, July, and August. Dried *Gadus Morrhua,* called "berge fish" and "thlip fish," is likewise much eaten by the lower and middle classes; so also are *Pleuronectes Cimanda* and *P. Flesus* (flounder), and amongst all classes, *Esox Bellone* (sea-pike), which in the spring and summer is extremely cheap. *Pleuronectes Platessa* (plaice), *P. Solea* (sole), *P. maximus* (turbot), *Esox Lucius* (pike), *Cyprinus Carpio* (carp), and *Perca fluviatilis* (perch), are rarer and expensive, and are, on that account, only now and then to be found upon the tables of the wealthy. Excellent *salmon* is got from Randers, in Jutland, but is very dear. *Crabs* are rare; *lobsters* more abundant; *oysters* are chiefly got from the western and northern coasts of Jutland and from Norway; *shrimps* and *muscles* are very common, the former particularly in summer, the latter in the winter, when their frequency is considered to indicate frost.

The *vegetables* in most general use are *potatos,* different sorts of *cabbage, green peas,* &c., and are cultivated everywhere around the town, particularly on the island of Amack. *Asparagus* is excellent, but being very dear, is only found at the tables of the more opulent.

The *fruits* are, of course, upon the whole, not of so good quality as in the more southern parts of Europe, which is to be ascribed not only to our cold and humid climate, but also to want of culture, the

management of fruit trees not having reached, as yet, the same perfection as in England and France. The winds, which blow almost the whole year, blow many fruits off before they are ripe, and many are gathered in an unripe state and sold, although this is forbidden by law. The best fruits are pears, apples, (of which we have several excellent sorts,) cherries, gooseberries, currants, and strawberries. The last-named grow wild, but are also cultivated in all gardens in the country, and are eaten as a dessert with cream and sugar. We have two national dishes prepared of fruits, the one is made of the juice of cherries, currants, or raspberries, boiled with sago, starch, or arrow-root, to a thick mass; this is called *rodgrod*, (red porridge,) and is eaten cold, as a dessert, with cream and sugar: the other is prepared from apples, boiled with sugar, (apple porridge,) and is eaten cold or warm, as a dessert, with sheep's milk. *Cider* is very seldom made here. Of *foreign fruits*, we get lemons, oranges, and grapes, from Malaga and Messina; rainettes from France, &c. The finer fruits, as apricots, peaches, grapes, &c., seldom ripen in the air, but must be grown in hot-houses, and are very dear.

The *bread* in Copenhagen is not so good as in other large places, though it is better than in London. Our corn, rye, and wheat, of which the bread commonly is made, is frequently not of the best quality, being mixed with other seeds, often with such as may be noxious to health. Humid summers and autumns may be considered as the principal cause of this, but perhaps also the bad ploughing of the peasants. Different sorts of white bread are made from wheat,

according to the fineness of the flour, the softer or harder crust, and the addition or non-addition of milk, butter, or eggs. With tea and coffee, biscuits and other sorts of finer white bread are used, but they cannot be compared to the same sorts in other countries; the most delicate are the *christmas-cakes* and *lent-dumplings*, which are made from the finest flour, and mixed with milk, raisins, and citrons, but are certainly not the most digestible food. We have two sorts of *rye bread*; the one is made from sifted flour, and is very good; the other of flour not sifted, being very coarse and perfectly brown. The last named is almost the only bread eaten by the lower classes. It is certainly very nourishing, but indigestible, particularly for those who suffer from dyspepsia and disposition to acid in the stomach. Once a year, and sometimes oftener, according to the price of corn, an assize is set on this rye bread by the magistrates. A valuable sort of ship bread is also made of the flour of rye. Puddings, omelettes, pancakes, &c., are prepared from the flour of wheat, with milk and eggs, and they are, upon the whole, delicate and favourite dishes with us. A most common dish in Denmark is *porridge*, made either from barley, groats, wheat, rice, or from the flour of potatos; these are boiled either with water or with milk, mixed with butter and salt, and eaten at dinner with beer, or amongst the more opulent classses with claret and sugar.

Milk is regularly procured in great abundance, either from cows fed in town, or at the country-seats and farms in the vicinity. It is in general very good, and gives plenty of cream, so that

Copenhagen in this respect far excels London, Paris, Berlin, and other large cities. Of course frauds now and then occur, but they are not frequent, consisting perhaps only in the diluting of the milk by water. In the summer time *curdled milk* (milk put in plates and left to separate into coagulum and acid serum) is much eaten as a favourite dish, with sugar and grated rye bread, but that with which the poorer classes are provided, is not always of the best quality, being sold by shopkeepers in cellars, where the milk often is poured into unclean plates, in order to produce a quicker separation of its constituent parts, and exposed to a dense atmosphere and the fumes of tobacco. When the serum is pressed from the coagulum, this forms another dish, which, mixed with cream and eaten with sugar, is very delicate. *Sheep's milk* is often eaten to apple porridge, but it is frequently imitated by boiling cow's milk with flour and mixing it with cream.

There are few countries in which *butter* (always however salted,) is so much used as in Denmark; almost all the dishes, meat, vegetables, cakes, &c., being prepared with it in abundance. It is, consequently, no wonder that Zealand is unable to furnish the inhabitants of Copenhagen with the necessary quantity of it, and that much must be brought from the provinces, particularly from Holstein. It is on this account very dear, and not always of the best quality, although never mixed with noxious articles. The only kind of cheese that is prepared in Zealand is merely coagulated caseum, mixed with carraway seeds; the lower

classes eat two other sorts, one prepared in Jutland, called *knapost* (the *barschkäse* or *pimpkäse* of the Germans), from sour milk ; the other brought from Holstein ; but they are both very indifferent. The first named is remarkable from cases of poisoning having now and then of late occurred from eating it. Such cases have been particularly observed in Jutland, the native country of the cheese. The symptoms, in all the cases hitherto recorded, were violent vomiting and diarrhœa, pains in the belly, cardialgia, horripilations, cramps of the extremities, feeble pulse, &c., consequently, upon the whole, such as distinguish the acrid poisons ; sometimes the symptoms of the narcotic poisons also occur, as, for instance, giddiness, headache, hallucination of the senses, &c. These cases have never with us, as in Germany, proved fatal, and the patients recovered, in the course of from two to eight days, either without any remedies at all, or by emetics and mucilaginous draughts, followed by laudanum. The cause of the noxious quality of this sort of cheese is not in the vessels in which it is prepared, for they are not of copper, and neither this metal nor any other inorganic poison has, by chemical analysis, been found in the cheese either here or in Germany ; but since cases of poisoning have occurred here by this cheese only, and in Germany by the same sort, we must seek the origin of its noxious quality in the circumstance, that the Danish as well as the German cheese is prepared from sour milk, while all other sorts of cheese are made of fresh milk. The poison in the Danish *knapost* and the German *barschkäse*

must consequently be a product of the process of fermentation in the cheese, perhaps a sour ammoniacal salt, which has been found in the extracts procured from such poisonous cheeses. From some experiments however, made by Dr. Müller, here in Copenhagen, and published by him in the eighteenth volume of the *Bibliothek for Læger*, it appears that the same salt is also found in the extracts obtained from cheeses that had *not* proved poisonous, so that we are still uncertain as to the poisonous principles.

All *condiments* are of course imported from warm countries, but it cannot upon the whole be said that the Danes make any abuse of them, our dishes not being seasoned more than they ought to be.

The Danes at dinner usually partake of no more than two or three dishes, one of which is always a kind of porridge or soup, made from barley or rice, boiled with water or milk, and sweetened with sugar or the juice of fruits, which precedes the boiled or roasted meat, or some sort of fish. At dinner parties from six to eight dishes are served up singly. The German or English cookery is in general preferred to French.

Water is not drunk much in Copenhagen, principally because it is not very good, and often very bad, unclean, and muddy. The supply of fresh water for the inhabitants of Copenhagen is from the main fresh water lakes in the neighbourhood of the town, and from wells within it. The fresh water lakes supply the town with the greatest quantity. The water from the lakes, having a lower level, is conveyed through tubes below the earth, and distri-

buted to all the houses, requiring to be pumped up; that from the lakes with a higher level, mounts so high in the tubes, that it runs out of itself, for which reason it is called spring water. A very limited part of the town is furnished with this spring water, the greater part of it being situated lower than the lakes. There are nine of these lakes in the neighbourhood of Copenhagen, but only four are usually had recourse to, to furnish us with water; the other five, which are connected with these by conduits, are only to supply that water which may become deficient in the former during long dryness and heat. Two thousand two hundred houses are in this manner furnished with pump or spring water through nineteen main pipes; for those who have no pipes carried to their houses, there are sixty-two public pumps distributed in convenient places. In spite of all this machinery the water is often, in winter as well as in summer, very unclean, turbid, and of a bad taste, particularly during long frost or long heat, or after violent storms. The reasons of this are undoubtedly the following. The bottoms of the lakes are muddy and covered with various plants; the water contains clay, mud, sand, &c., but only a small quantity of lime, (chiefly the carbonate, with a small portion of muriate, but no sulphate,) and a little muriate and carbonate of magnesia; it is stagnant, and consequently contains many animal and vegetable particles, the last often in so great a quantity that the surface is covered with a green scum. In order to prevent the impurities of the lakes from being conveyed through the pipes to the houses and mixing

with the water that is pumped up, the main pipes at the lakes take their origin from double wooden squares, perforated with many holes, through which the water runs, and filled with small stones, in order to keep back the impurities which pass through the holes; but as this succeeds only very imperfectly, and other means for effecting the same object have been tried in vain, the best mode of attaining the object, is beyond all doubt to keep the lakes as free from impurity as possible, and often to cleanse their bottom from mud, particularly near the main tubes. This is however done in an imperfect manner, and not often enough; and taking into consideration that many houses are situated on the margins of these lakes, the inhabitants of which, in spite of the laws, take all sorts of liberty, it is not to be wondered at that the water is contaminated more and more with impurities, and that the lakes themselves every year decrease in size as well as in depth. Another circumstance which contributes to the bad quality of the water, is the material of which the pipes are made; they are all of *wood*, and of the least durable sort—*fir*, of so loose a structure, that water as well as air easily passes through it. The pipes have, nearest to the lake, a bore of seven inches diameter, but afterwards in their whole course of two or three hundred yards, they are only from five to five inches and a half in diameter; along the streets they are four inches, while the branches are only three inches, and at their extremities at the pumps the bore is not more than two inches. Slimy vegetable and animal matters are deposited from the water, and with

infusoria adhere firmly to the wood, until at last this gets rotten, and the water cannot but become unclean and noxious to health. There is on this account a perpetual mending of the pipes along the streets, which contributes much towards the spoiling of the pavement. The pipes ought to be made from burnt clay or from cast iron, which, though very expensive, would last much longer.

The *wells* and *fountains* within the town, of which, in 1805, there were four hundred and ninety-one, are decreasing every year, through want of cleansing and other proper attention paid to them. Considering that Copenhagen is a fortress, and might be besieged again, the importance of these wells will at once be seen. Their present state is extremely bad, though, if they were repaired, covered, and surrounded by clean sand, &c., there is every reason to believe that they would afford much better water than that of the lakes, several of them, which are kept in a proper state, giving most excellent water, and the best in town. The water of the wells contains, particularly, carbonate of lime, muriate of potassa and of magnesia, sulphate of lime, and silica.

The *beverage* which, regarding the climate, situation, and products of Denmark, seems the most natural and wholesome to its inhabitants, is *beer*, which, undoubtedly, was known in Denmark from the oldest time. The attention of the Government has been always directed to this beverage, care being taken that the brewers furnished the people with cheap and good wholesome beer. The system of monopolies and corporations was once considered

the best means to the attainment of this, but experience having proved it to be no sure guarantee, the law of incorporation was suspended, and it was left to the brewers to vie with each other in acquiring and deserving the confidence of their fellow-citizens, by making beer cheap and good at the same time. The beer, upon the whole, however, is neither so cheap nor so good as might reasonably be expected in a corn country, which depends upon an imperfect method of preparing and drying the malt, or upon the fermentum not being added at the right time, or being used in too small a quantity. The malt is only infused in boiling water, not boiled with it, so that perhaps the strongest and most juicy parts are left in the mash. Barley is the corn which is almost exclusively used in the making of beer in Denmark; and, according to the manner in which the malt is dried, whether in the air or by artificial heat, we have two sorts of beer, *pale* and *brown*, both of different strength and goodness, a bottle of the most inferior and weakest kind being sold at one penny. A sort of *porter* which is distinguished by an agreeable bitterness, and is rather strong, may be considered excellent, and, is, besides, more wholesome than the English porter, but it is dear, and very seldom drunk. The comparatively high price and inferior quality of the beer, is certainly one of the reasons why so much *spirits* are drunk by the lower classes, who think themselves at liberty to drink them on account of the cold and humid climate. The Danish *brandy*, made from different sorts of corn, is, upon the whole, very good, and *too cheap ;* but although too

much of it is taken by the lower classes, drunkenness has of late decreased considerably There are, however, many who still go on sipping a little brandy the whole day, and, consequently, are never perfectly sober, and the disease arising from the abuse of spirits, the *delirium tremens,* is, as will hereafter be seen, a frequent disease amongst us. The readiness with which spirits can be got, contributes much to their abuse; brandy-houses are scattered through the town, and it is the universal custom of the inhabitants to pay all smaller services of the labouring classes with a glass of brandy (*schnaps*). The *females* of the lower classes are much less addicted to the drinking of spirits than in England, a drunken woman in the streets being a rarity, and always accompanied with the shouts and huzzas of the street-boys. *Punch* is a favourite beverage with the Danes in general; by the lower classes it is drunk at all festivals, and by the higher classes very often at smaller parties. It is very well made, although often of new rum, but cannot be compared to that excellent punch made in Glasgow. Of pure *spirits* the more opulent classes only take old *rum* from the West Indies, or *cogniac* from France; a *schnaps* of one of these is also taken almost daily by them, a custom which we might wish eradicated, as it spreads to all the young members of families, so that boys from thirteen to fifteen years old already take their *schnaps*. One or other of these is also always handed about at parties, accompanied by bread, cheese, and sweetmeats, in the interval between tea and supper.

As *brandy* is the liquor most liked by the lower

classes, so is *wine* by the higher. All sorts of wine are imported, and the duty laid upon them is so small, that they are to be had here at a very cheap price; those that are most commonly taken at dinner, and in most houses of the more opulent daily, are the different sorts of claret, particularly Medoc and St. Julien; a bottle of one of these can be had here at the low price of eightpence. The wine is scarcely ever drunk mixed with water. At dinner parties six or seven sorts are taken with the different dishes; but it is not the case here as in England, that the most wine is drunk at the dessert, the ladies not retiring before the gentlemen, and the taking of wine together is only common with those who have been in England or in the West Indies, or who know and relish the English manners.

A sort of spiritous liquor, called *mead*, produced by the fermentation of honey, water, hops, &c., mixed together, was a very favourite beverage with our ancestors, but is now very seldom made or drunk except now and then in the country.

Coffee and *tea* are very much drunk in Copenhagen, so that upwards of half a million of Danish dollars are yearly expended in these two beverages. In the houses of the opulent, *coffee* is taken twice a day—in the morning and immediately after dinner; it is, for the most part, strong and good, and always mixed with cream and sugar, being often combined with dandelion, in order to give it a more bitter and stronger taste. *Tea* is by some taken in the morning instead of coffee, but almost always three or four hours after dinner with biscuits or sandwiches;

it is always made of the brown leaves (black tea?). In some houses tea is taken in this manner at nine o'clock, in the place of supper. In the morning the coffee or tea is taken with biscuits or sandwiches, never, as in England, with eggs or cold meat; but a luncheon, consisting of sandwiches or cold meat, is mostly taken at eleven or twelve o'clock. The dinner hour amongst the higher classes, is three or four o'clock; amongst the middle or lower classes, twelve or one. The supper is extremely frugal, and always cold, except at parties, and accompanied with a *schnaps* or a glass of beer, seldom of wine. Gin or brandy, mixed with warm water, is scarcely ever taken at supper.

I cannot conclude these remarks on the food and the manner of living of the inhabitants of Copenhagen, without speaking of the use we make of *tobacco*, and in which we imitate the Germans. It is *smoked* amongst all classes; but in the higher ones, never in company with the ladies in closed rooms. The smoking of tobacco is so general, that it is even observed amongst boys from fourteen to fifteen years old. *Snuff* is very common among literary men; it is only seamen who *chew* tobacco.

MEANS EMPLOYED FOR THE PRESERVATION OF HEALTH.

Having given a short review of those circumstances influencing health and disease, which depend upon the climate, the character, and the manner of living of the people, &c., I shall now, approaching nearer to my principal object, mention the means which the nation itself on the one side, and the government on

the other, employ in order to preserve health, and remedy those evils which have a local origin.

Amongst the best means of preventing diseases, more immediately depending upon the people themselves, are sobriety and cleanliness. The inhabitants of Copenhagen may, upon the whole, be considered a sober people; for though excesses in drinking now and then occur, they are not frequent, and, amongst the higher classes, drunkenness and intemperance are considered such great vices, that every body addicted to them, is shunned, and not admitted into genteel company. Even at parties, where only gentlemen meet, a drunken man is a great rarity. The lower classes certainly drink much spirits; yet, although this practice is carried to a greater pitch than in France and Italy, it is never followed to that excess as in England, Sweden, Norway, or Russia. In *eating*, the Danish people may likewise be called temperate; for though at large parties more dishes are served up than necessary, the daily fare is, among all classes, extremely frugal.

We could wish to give the same praise as to personal *cleanliness*, but this is a virtue in which the Danes in general do not excel. I do not of course speak of the more respectable classes, which, at the present day, resemble one another in all countries; I speak only of the people at large, and then I may say with justice, that cleanliness is *not* cultivated. In the houses of the lower, and even of the middle classes, the rooms are often dirty and badly aired, and the inhabitants themselves often wear dirty linen. What still more augments the

uncleanliness of the rooms of the *poor*, is the very great abuse of *sand* with which the wooden floors and staircases are commonly covered, and which, for that purpose, is brought in large boats from the seacoast to the town. It is considered a proof of cleanliness, but appears, on the contrary, to be a means of concealing dirt, promoting the development of insects, preventing true cleanliness, in a humid state producing unhealthy vapours, and in a dry one raising dust. A great part of the sand used for the above mentioned purpose, is afterwards washed into the kennels of the street, and carried into the canals and into the harbours, which again, and with great expense to the State, must be cleansed from it; another part is swept together, and carried away by the dust carts which collect all the impurities of the houses and the streets. The privies are usually built up in the back courts, which are often very confined, and surrounded everywhere by high buildings, while the cess-pools with which they communicate are not cleansed more than twice a year at the most. This circumstance, together with the practice of keeping animals in small stables increases still more the uncleanliness of the houses. The number of horses kept in the town is about three thousand; of cows there are two thousand five hundred, and as they are principally kept by shopkeepers, who inhabit small houses in narrow streets, they are of course in very small and badly ventilated stables.

There is nothing more neglected among the poorer classes, and too often also in the middle classes, than the personal cleanliness of the children; and what

increases the evil still more, is the very rare use of baths, which not only arises from a former want of baths, but also from a natural dislike to them. It is certainly a great desideratum that in so large a town as Copenhagen, warm baths should be gratuitously given to the poor, particularly as the climate must tend to promote uncleanliness; but even if there were establishments of this kind, I doubt whether they would be used. Even cold sea-bathing, for which Copenhagen, surrounded by sea, affords such facilities, and which, undoubtedly, is not only the best preventive, but also the most valuable remedy of many diseases, is not much used in the summer by the lower classes. No more than eight years ago there was not even a single bathing place for the more respectable classes, so that the few who wished to bathe, were obliged to do so in places where they were at all moments disturbed by passengers; this defect has, however, been supplied by two excellent bathing-houses, erected by private contributions, which have acted so advantageously, that bathing has grown fashionable amongst all the better classes, and private bathing-houses are now to be found along the sea-coast for three miles in the neighbourhood of the town. There is besides, in the town, an excellent steam bathing-house; a smaller one is in one of the sea bathing-houses; and Fredrik's Hospital and the Hospital of the Penitentiary are likewise each provided with a similar one.

It has at all times been an object with the Government to maintain public cleanliness, as clearly appears from the many wise regulations

tending to the attainment of this end, so that Copenhagen, considering its size, does more at present to enforce public cleanliness than any other large city in Europe; and yet it is more difficult to obtain this object here than elsewhere, from the want of running streams to remove the impurities of the town, which, consequently, must be carried away by horses and carts, or cleared out of the channels and harbour. It is forbidden by law to throw dead animals or other impurities from the houses out upon the streets, and all dirt is directed to be swept into heaps on both sides of the streets, public dust-carts being provided to collect these dirt-heaps, and take up all the impurities from the houses. The kennels, on both sides of the streets, are also ordered to be well cleansed, and the water and other impurities carried into them from the houses, are conveyed through large brick-laid channels to basins, the outlets of which are furnished with a grate, which allows the fluid and less consistent parts to pass through, but keeps back the more solid matters, which are afterwards taken up and transported out of town. In the winter, when snow has fallen in great quantity, the carts are immediately sent round to collect the snow and carry it away, and should hard frost prevent its entire removal, the landlords of all the houses are commanded, on the first signs of thawing, to break up the frozen snow and water, while the carts carry the collected heaps away, a regulation which is observed so strictly that the rapidity with which the streets are thus cleansed is often astonishing. The yearly expenses of the magistrates for the

cleansing of the streets, amount, at present, to the sum of forty thousand Danish dollars; but in spite of this expenditure, the streets are, in summer, covered with dust, which, in consequence of the frequent blowing of winds, fills the atmosphere and the eyes of the passengers.

The numerous canals in the town, which are all stagnant, receive much of the impurities from the houses, and would, consequently, be a prolific source of noxious exhalations if they were not well cleansed; but this is done according to law, as often as the depth of the canals appears to be less than it ought to be. The yearly expenses incurred by the State for this cleansing, amount to the incredible sum of one hundred thousand Danish dollars. The ditches around the town—a necessary evil connected with a fortress—are another prolific source of corruption of the atmosphere, as they only contain stagnant water, and, particularly during hot summers, emit a most disagreeable stench, which is carried by the winds over the town. The Government has of late tried to remedy this by putting the ditches into communication with the sea, and by draining them and planting fruit-trees in them; but as this plan has not been universally carried into effect, the change has not quite answered the purpose.

With respect to the influence which several professions and trades may have in corrupting the air of the town, several good regulations also exist, interdicting certain craftsmen and workmen from exercising their trade within the town itself, as, for instance, lime-makers, train-oil boilers, &c., and allowing only a certain number of others to live

there, as, for instance, butchers, who are only permitted to live at the outskirts of the town, and must slaughter their swine, oxen, and other large animals, without the town. It is, nevertheless, not to be denied, that this law might with propriety be extended still farther than it is, and the Government, taking the same view, has justly ordered, in the case of several trades, that hereafter those who set up in these particular branches, shall carry on their trade without the town, as, for instance, soap-makers, tanners, tallow-chandlers, &c. It is likewise forbidden to every body to keep *swine* in stables in towns, as these animals occasion many noxious exhalations, and cause much dirt in the houses. Of late also it has been ordered that no dead bodies shall in future be buried in the churchyards within the precincts of the town as formerly, a regulation which ought to be adopted in all large towns, as the air must necessarily be corrupted by the burying of the dead in the midst of a crowded population. Churchyards, all of which excel in beauty of design, have consequently been constructed without the three gates of the town; that called "Assistent's Churchyard" is most tastefully laid out, and may be compared with the celebrated Perè la Chaise at Paris. The graves are directed to be five yards in length, four yards in breadth, and three yards in depth; and every burial must take place in the day-time.

A regular emptying of the cess-pools, &c., is directed, their contents being ordered to be carried away twice a year, in peculiar carts, and in the night time, out of town, to the island of Amack,

where at a convenient distance there is a large deep pit for their reception. These carts are in motion every night during the whole week, except on Saturday, and from sixty to eighty cart-loads are in this manner brought away every night. They are only allowed to drive from eleven o'clock at night till five o'clock in the morning in winter, and four o'clock in the summer. The carts are tight, but not covered as they ought to be, and as they all must pass through a particular part of the town in order to reach Amack, that part is extremely disagreeable to the inhabitants of the houses and to passengers, so that further regulations and improvements in this respect are very much wanted.

The landlords of all houses are bound to carry the snow and the ice, which accumulate within the court-yards of the houses, in carts out of town; all sweepings from train-oil-boilings and lime-making are the same night to be removed by the dust carts; and the inner space of the yards must have a certain breadth and length, and be provided with a sufficiently good pavement and kennels.

The public regulations in regard to noxious *food* and *drinks* in Denmark, may vie with those of any other civilized country. It is the office of the town-physician to take care that no food or drink which is corrupted or spoiled is sold; all imported victuals which may have sustained damage at sea, must be examined by him, and is either prohibited or applied to such uses only as will not be injurious to health; humid or unripe corn is not allowed to be sold for making bread; a certain manner of tinning copper vessels employed in the preparation of food, is

prescribed by law, so as to answer the purpose effectually; the sale of poisons is limited to druggists and apothecaries, and no poison is to be sold but on certificate from a clergyman specifying to what purpose it is to be employed; the druggists and apothecaries are to keep all poisons in particular cabinets, in glasses or in bottles, marked "poison," and must register in a particular book, all the poisons sold, the names of the purchasers, and those of the clergymen who have given the certificates, which book is every year to be laid before the town-physician and the Royal College of Health, on their visiting the apothecaries' shops. The most common poison employed in the killing of rats and mice, (arsenious acid,) is ordered to be sold mixed with charcoal, that it may not resemble powdered sugar, and in this manner be swallowed by mistake; and when it is given to the buyer, it is to be enclosed in black paper, sealed, and marked "poison." Pastry-cooks, fabricators of toys, &c., are severely punished for using noxious or poisonous colours, and that they may not plead ignorance of what is noxious, a catalogue of those colours which they are allowed to use, has been drawn up and communicated to them Poisons are allowed to be sold to dye-houses or metal-works without a certificate from the master of the police or a clergyman, but if anybody who in this manner has got possession of poison either sells it, or gives it to anybody else, or keeps it so carelessly that any part of it can be lost or stolen, he is fined in a penalty of from fifty to one hundred dollars.

The general regulations adopted for preserving

the health of the inhabitants having been stated, we now proceed to mention those institutions and provisions which are had recourse to with the view of averting particular diseases and particular evils.

As a trading town, Copenhagen is much exposed to the importation of those contagious diseases which ravage the warmer climates,—the *plague* and the *yellow fever*,—and although these are not very much to be feared in the northern countries, where they undoubtedly loose their original character, or at least are considerably modified, yet, as there have been instances of epidemics of a pestilential character, for instance, in 1711, when a great part of the inhabitants of Copenhagen perished by a deadly contagious disease, it is greatly for the interests of the State to be provided even against the possibility of such an event. We have consequently a *Board of Quarantine*, in order to prevent the creeping in of contagious diseases from the sea-side, from which board, in the course of time, many judicious regulations, approved of by the Government, have issued. All vessels coming from suspected places, must be furnished with certificates of health by the respective consuls of the places, and those which arrive from places visited by any contagious disease, must keep quarantine for a smaller or greater length of time, according to the character of the disease, and the nature of the goods which they import, being further subjected, if necessary, to fumigations of chlorine. Certain goods to which contagion adheres more firmly, are, if brought from very dangerous places, entirely excluded from importation. Three or four times

a year a list is published of those places which are either suspected or really infected, and for the information of masters of vessels and merchants there is a specification of those goods which, according to experience, are considered liable or not liable to lay hold of and retain contagion. There are similar laws of quarantine in order to avert the contagious diseases of cattle. To superintend all these regulations, and to take the necessary measures, there is both a *Royal Board of Quarantine*, and *Committees of Quarantine*. The former, which is for the whole country, and is established at Copenhagen, consists of five members, amongst whom there is *no* medical man; of the latter there is one in every large town of Denmark, consisting of three (in Copenhagen, of four,) members, one of whom is always the town-physician. These Committees are under the control of the Board of Quarantine, and must execute its orders. I need not advert to the singularity of there being no medical man in the Board of Quarantine, although the evils which might arise from this arrangement are, in a great measure, prevented by the correspondence which the board, in cases of doubt, keeps up with the Royal College of Health.

In order to promote recovery from *contagious diseases* which already exist, and to prevent their spreading, we have likewise very good regulations. In the provinces the landlord of the house in which the person attacked lives, must immediately announce the existence of such contagious disease to the magistrates, by whom the parish-physician or surgeon is sent to the house. After having ascertained the

nature of the disease, every thing adapted to the speedy treatment of the patient and to the prevention of the spreading of the disease is arranged by the medical officer; all obstacles to cleanliness are removed, the patient is separated from the rest of the household, and, if more should be attacked and die, the speedy burial of the dead is provided for, the infected houses are isolated, and such other measures taken as may be required. If the patient be poor, all is done at the public expense. The existence of a spreading disease, its course, increase, or decrease, &c., as of all epidemics, must be communicated by the parish-physician to the Royal Board of Health, which again examines the measures that have been taken, and provides the patients with a sufficient number of medical men. In Copenhagen itself the above-mentioned arrangements cannot well be made, and are less necessary; but if a disease of very dangerous character should spring up, every medical man is enjoined to announce every patient suffering from it to the town-physician, who reports the epidemic to the Board of Health, and, with the assistance of the police, takes measures similar to those above-mentioned.

With respect to *small-pox*,* the most effectual measures have been taken for averting the attacks of this formidable disease by the practice of vaccination, and no prejudices of the people having contended with the laws concerning this important

* This disease was formerly quite as dangerous and fatal here as in other countries. From 1749 to 1798, the number of persons who died of it in Denmark, amounted to 12,231; in the year 1750, the greatest mortality occurred, viz., 1457.

subject, there is, we may venture to say, no country in all Europe in which vaccination is so general as in Denmark, a circumstance to which, it must be confessed, the small extent of the country has contributed its share. The first child was inoculated with vaccine-lymph in Copenhagen on the 6th of July, 1800, but vaccination was not properly introduced before 1801, when, by the exertions of the late Dr. Winslöv, it was brought into general notice. A Society and a Committtee were then formed to enquire into the results of vaccination in other countries, which, after ascertaining its efficacy, forwarded vaccine-lymph to all parts of the country gratuitously, and endeavoured to extend the operation by all possible means. The Government soon paid a due regard to the subject, and, as early as 1801, a Royal Special Board of Vaccination was appointed to superintend the practice, and from which the most effectual regulations in this respect have emanated. Since April, 1813, it is ordered by law that no person shall be admitted into a school or trade, to the rite of confirmation, to employment in a public office, or in the military service, or be permitted to marry, without a certificate of having been vaccinated with full success. An institution was established at the public expense, in which any person may be vaccinated gratuitously, on condition of returning eight days after for examination, that it may be ascertained whether the inoculation has succeeded in producing the true vaccine. It was ordered that all soldiers and sailors, with their wives and children, should be vaccinated at a certain age, and that vaccine-lymph should

be forwarded from the above-mentioned institution to any of the provinces whenever it is required by the parish-physician, or by any medical man. It is also required of every practitioner in the provinces to send in an annual list to the parish-physician of all those he has vaccinated with success in the course of the year, and the same must be done by the Vaccine Institution, and, according to a more recent regulation, by all the practitioners in Copenhagen to the city physician; all these lists are forwarded to the Board of Vaccination, and a general list is drawn up and delivered to the Court of Chancery and published.* The parish-physicians and surgeons in the provinces have a strict order to make an annual circuit of their parishes for the purpose of vaccinating all who may desire it, and their arrangements are to be such that they may return to each place on the day upon which they will be able to judge of the genuine nature of the pustules produced; if any parish is so extensive that the business cannot be done by its own physician and surgeon, assistant medical men are sent by the Board of Health. In this way, from the year 1802 to 1834, that is, during thirty-three years, seven hundred and eighty-eight thousand nine hundred and seventy-four individuals were vaccinated in Denmark. It is furthermore enacted by law, that as soon as a case of small-pox shews itself, all the inhabitants of the place, (and if in a town, of the house,) who

* At first, vaccination was not only practised by medical men, but in order to extend it, it was also intrusted to every body who was willing to undertake it, particularly to clergymen, schoolmasters, midwives, &c.; but of late the certificates of such persons not being confided in, the operation has been restricted to medical men.

have not had the small-pox or the cow-pock must immediately be vaccinated; and it is likewise ordered that as soon as a medical man observes a cutaneous disease which has the appearance of small-pox, he is to announce it to the parish or to the town-physician, and in case of no medical man being in attendance, the father or mother, or tutor, or master of the house, is to make a similar announcement to the clergyman, or to the lieutenant of police, whose duty it then is to take further measures. The inoculation with the matter of the small-pox itself is prohibited, in order not to propagate the disease; particular wards are arranged in the public hospitals for the reception of small-pox patients; all the clothes and the linen of such patients must be washed and fumigated before they are used again; and the same must be done with the room in which such a patient has been lying. By these regulations, the neglect of which is punished severely, and by public rewards to those who distinguished themselves as promoters of vaccination, the small-pox seemed to be eradicated in Denmark. No case occurred during fourteen years; the young Danish physicians had never met with it, and the professor of therapeutics at the University, the late L. Bang, did not even think it necessary to lecture upon this disease, omitting it entirely from his course. But the expectations excited were here, as in other countries, too sanguine; in the last ten years we have repeatedly had epidemics of small-pox, which (vaccination being universal,) likewise attacked vaccinated persons. The value of vaccination has, however, been confirmed by these epidemics; for in many vaccinated

persons who exposed themselves to the contagion, and were infected, the disease proved very mild, and was modified, and the few who died had perhaps not been vaccinated successfully. We shall afterwards treat of these epidemics, and it is only necessary to remark here, that only those vaccinated persons were attacked by the disease who had been inoculated with the cow-pock a long time previous, (from twenty to twenty-five years,) and that the susceptibility for the infection decreased in proportion to the shortness of the interval which had elapsed since vaccination was performed, all those vaccinated within five years having uniformly escaped the contagion. These facts prove at least the modifying, if not the perfectly preventive efficacy of vaccination, and do not warrant the assertion, that the vaccine matter by passing through so many individuals in the long course of years, has lost its influence; they show also the great utility of *re-vaccination*, and, although experience has not as yet fixed the term within which a repetition of the prophylactic operation is to be made, re-vaccination has begun to be very common with us, and has lately been ordered in the army: hitherto no re-vaccinated person has been attacked by small-pox. In order to arrive at certain conclusions as to the employment of re-vaccination, an order has lately been issued to all medical men to give in an annual list to the town-physician, not only of those they have vaccinated in the course of the year, but also of those they have re-vaccinated, and with a statement of the result, of which lists the town-physician is to make a general one for the Board of Health. Until 1836, all the

inhabitants of Denmark were inoculated with the same vaccine lymph, which was forwarded to us from London in 1800, and carefully kept up; but lately we have got new lymph from a cow in Holstein, the inoculation with which has perfectly succeeded.

Formerly, when any one was attacked with small-pox, he was always to be sent to an hospital, exclusively restricted to that use, on the island of Amack, where a very strict quarantine was kept; but this regulation having had no effect whatever in preventing the spreading of the disease, but, on the contrary, rather keeping the contagion up, in consequence of every one endeavouring to conceal the disease in order to avoid the transportation from home, has lately been abolished, and every small-pox patient can now remain at home and be attended by his own physician, or go to whatever hospital he pleases; while it is merely written upon the door of the sick chamber in the house:—"Small-pox here."

With a view to the prevention of that dreadful disease, *hydrophobia*,—an affection which, however, is exceedingly rare with us,—it is enjoined that every body who keeps a dog must announce it to the police, paying a certain tax and getting a ticket, which is to be put around the neck of the dog; all loose dogs without such a ticket that at any time run about in the streets, are immediately taken up by the police, and the owners fined; or if no owner is found, the dog is killed, by which regulation too great a number of dogs is prevented. At times, when dogs suffer from this peculiar affection, the

dog-disease, they are to be kept confined at home, and are not allowed to remain on stair-cases or in the streets; and whenever a dog bites, an announcement of such an accident is immediately to be made to the police, by whom the dog is sent to the Veterinary College, where it is kept and observed in order to see whether it is or becomes mad. The owner of the dog is in all cases to make pecuniary amends to the bitten person, and, if he dies, is subjected to the severer laws of the country; the bitten person is likewise immediately taken care of by the police, and is either sent to an hospital or confided to a private physician, who is to report to the town-physician the symptoms, the course, and the final event of the disease. In the hospitals a separate room is provided for the bitten person, and if canine madness manifests itself in him, the sheets of his bed and his linen are afterwards to be burnt, and the articles of furniture of wood, metal, or the like, which have been in contact with the deceased, washed with boiling lye.

The *venereal disease*, as in all civilized countries, becomes an object of legislative interference. Brothels are permitted by law as a necessary evil, but all the public women inhabiting them, or living separately, are under the control of the police and registered, and every month they are directed to be examined by one of the physicians of the police, in order to ascertain whether they are infected with the syphilitic disease, and in case of being so, they are immediately brought to the *general hospital*. They are required to announce a syphilitic affection as soon as it occurs, and if

they omit it, they are either to pay a severe fine, or forfeit their privilege of practising. When a soldier is found attacked by syphilis, he is to point out the house where he believes he caught the disease, and the woman by whom he was infected, who is then without delay arrested. Such of the lower classes in the country as are infected with syphilis, are, by law, gratuitously attended by the parish to which they belong, and those who do not announce their infection are punished by imprisonment, or in some other arbitrary manner; and if a private practitioner gets a syphilitic patient of the lower classes in the country, he must immediately make it known to the magistrate. By these regulations syphilis is kept within proper bounds, and cannot be considered very common.

Death by drowning must of course happen frequently in a place like Copenhagen, surrounded every where by water; and yet it was long before we trod in the steps of other large cities, by the establishment of a *Humane Society* for the recovery of persons apparently drowned. Up to 1796, no other regulations existed than those by which fishermen were directed whenever they made an opening in the ice in winter time, to put a mark at the hole, or sentinels commanded to prevent the skating or bathing in dangerous places. In 1796, however, the late Dr. Herholdt and Dr. Rafn published a work treating of the means of restoring drowned persons, and therein exhorted the inhabitants of Copenhagen to contribute to an institution for that purpose. This had the desired effect; a humane society was formed and a board appointed to frame a plan, though it

was not before 1800 that the society, supported by royal and private subscription, entered into activity. It was then announced that "a public reward or premium will be presented to every body who saves a person from perishing in water, or by suitable means restores a drowned individual to life, and that instruments and implements for this purpose are to be found at ten places within and without the town, where there is the greatest risk of drowning, either in summer by bathing or in winter by skating." These implements, consisting of every thing necessary to the restoration of life, are also to be found at the three hospitals of the town, and there has been added of late at each of the dangerous places an apparatus, intended to save those who are in danger at a greater distance from the shore. The apparatus consists of a sledge with two courses, five to six yards in length, upon which are placed two boxes of copper, joined with wood, and separated from each other in the middle of the sledge by an interval one yard in breadth, of two rafts with iron points, two ropes thirty-five yards in length, a rope-ladder at each end of the sledge, and an oar. This sledge is intended to be used chiefly in winter upon the ice, in order to save those who fall through it, two persons being able to carry it with ease, or, if there is snow, to draw it. Before it is placed on the ice, a rope is fastened to it, which is held by a person who remains on shore, or on that part of the ice which is sufficiently strong to support him; the person who walks out with it draws it as far as he considers the ice thick enough, and where it becomes too thin, he places himself

on the sledge, and moves it forward by a couple of poles, with which he is provided. In open water the sledge is propelled by the help of the oar. The person who has fallen into the water is easily dragged up, the sledge not rising much above the surface of the water, and being without any gunnel. In order to enable any person to employ the proper means for the restoration of the drowned, a set of directions is printed and distributed gratuitously by the society; an account is also occasionally published of those who have been restored to life by the society or by others, and from those hitherto published, it appears that the efforts of the society have in many cases been crowned with success.

In a northern and cold country, where the dead are in general not buried before from six to eight days after their decease, and scarcely ever before signs of putrefaction are visible, there is little risk of the burying alive of a person apparently dead, but to avoid even the distant possibility of such a dreadful event, it is made a necessary condition for the burial taking place, that a certificate be given in town by a medical man, and in the country by two intelligent public officers, that the true signs of death are present; and if, in cases of poisoning, external lesions, &c., there should be anything requiring a forensic trial, the physician is bound to announce it immediately to the police.

Very appropriate police laws guard against the occurrence of accidents dangerous to health and life in public places, streets, &c. It is, for instance, forbidden to ride or drive too quickly through the

streets, and the horses which draw the sledges in winter are to be provided with small bells, that the passengers may hear them coming. All houses that are in building or under repair, must always be surrounded by wooden palings, which extend so far that nobody can be hurt by falling stones. The bridges are occasionally examined as to strength and solidity; and every house intended to be inhabited must be carefully examined by a proper board, in order to certify that it is built sufficiently strong and with a due regard to health. It is not allowed to put flower-pots in the windows without securing them outside with a wooden rail, to prevent them from falling down on the passengers in the streets, and the poles on which signs of the different trades are hung out, are in the same manner examined before they are used for the purpose of ascertaining whether they can bear the weight of the signs or not. The footways next the houses must always be free for pedestrians, and not encumbered with any kind of goods, and the kennels or drains which traverse them from the houses are always to be covered. All crowds in the streets are forbidden; and when a fire breaks out anywhere, the place is immediately surrounded by soldiers, so that all who do not belong to the fire-men or saving-men are excluded.

In concluding this article on the means of preventing injury to health and life, we must finally remark that, in Denmark, as in all well-regulated countries, positive and severe laws exist against *quacks* and *quackery*. No person is allowed to attend a patient without having gone through the necessary

examinations, which entitle him to practice as physician or surgeon, and if any one infringes this law, he is fined for the first offence in a penalty of twenty Danish dollars (two pounds), or in case of not having the means, is confined for four days on bread and water, and on a repetition of the offence, he is condemned to work in the penitentiary, the term of confinement being increased on every repetition of the act. Should, however, any person, not being a medical man, have acquired knowledge or ability in some special part of the art of healing, or in curing a particular external disease, he may, provided his ability is duly certified, get permission to attend patients afflicted with that particular disease. In spite of the laws against quackery, too much of it still exists in Copenhagen, although not so openly as in London and Paris, and quacks are often so supported by some of the higher classes, (not high in understanding,) that they frequently escape the penalty which the law imposes upon them.

DISEASES AND MODES OF TREATMENT.

In noticing the various diseases, it will be advantageous to arrange them under—1st, *epidemic diseases*, depending either upon a specific miasma or contagion, or upon more general causes; 2dly, *endemic diseases*, originating in causes more or less peculiar to the country, such as climate, weather, &c., or in the manners, habits, and customs of the inhabitants; and, 3rdly, *contingent diseases*, not coming strictly under either of the foregoing heads,

being observed more or less in all countries, and amongst all classes of men, but more or less modified in their character, according to circumstances, not sufficiently known.

EPIDEMIC DISEASES.

The northern situation of Denmark renders it less liable to be attacked by pestilential diseases similar to those which are wont to ravage southern and hotter countries, and the constant blowing of the winds tends also to prevent the occurrence of diseases of this class, which intercourse by trade with these countries might otherwise communicate to us. For the same reason our quarantine institutions have a much less influence in this respect, and might in many cases be dispensed with. Pestilential diseases *have* notwithstanding now and then visited us. From the year 1340 unto the present time, eighteen epidemics of a very contagious if not pestilential character, have visited Copenhagen and the rest of the kingdom. In 1349 a contagious and very fatal disease called *the black plague*, which, from 1346 to 1350, caused great devastation throughout the world, also reached Denmark, through the medium of a vessel, and carried off a great part of the inhabitants of Copenhagen and the whole country. It raged particularly along the coasts. In Jutland some towns, as, for instance, Viborg, Aalborg, and Aarhuus, were almost wholly depopulated, and it is said to have been so fatal, that only one quarter of the inhabitants of the whole country escaped death by it. In 1529, the disease

which went under the name of *Sudor Anglicus*, visited the whole kingdom, and was so fatal that in Copenhagen alone, on St. Michael's-day, it destroyed more than four hundred people.

The last general pestilential disease which ravaged Copenhagen, was in the years 1710 and 1711. It was introduced from Sweden by the Danish army, which after a battle in 1710, in Scania, returned with the disease to Elsinore, from whence it spread rapidly. This epidemic bore the character of a violent typhus fever, and was attended with petechiæ. In the winter of 1710–11, which was very mild and humid, it changed to a fever with miliary eruption, which also was very malignant. In the town and environs of Elsinore it swept away, in the year 1710, more than six thousand persons. In the month of June it took the character of a true plague, which during the same period ravaged Prussia, Lithuania, Thuringia, Pomerania, and Mecklenberg; from June to the end of the year the frightful number of forty thousand died from it. It was particularly fatal at the end of August and September, when the number of the dead amounted to three hundred daily. The most frequent symptoms of the plague were—great debility, giddiness, violent headache, sleeplessness, delirium, cardialgia, violent pains of the loins and the shoulders, vomiting, thirst, burning heat, sometimes accompanied with cough, bloody expectoration, bloody urine, menorrhagia, diarrhœa, sore throat, swelling of the glands in the groins, in the armpits, and round the throat, carbuncles, blue spots, petechiæ, &c., which symptoms commonly proved fatal on the

third or fourth day of the disease. It was in general treated by venesection and a long list of internal remedies, according to the state of medicine at that time. The use of chlorine fumigations, cold affusions, &c., was then unknown, and the disease ceased its ravages at the end of the year 1711, as it appears, without any interference on the part of Government or the physicians.

In the years 1788 and 1789, Copenhagen was attacked by a malignant and contagious *bilious fever*, which had already raged for some years among the sailors of the Danish navy, but did not assume its malignant character before the end of October, 1788, when the Danish fleet was united to the Russian vessels of war, and during the prevalence of cold wet weather and easterly winds. After the arrival of the fleet at the town, a great number of patients (about three hundred), were carried on shore to the Naval Hospital, infecting many of the attendants, who again propagated the disease to the rest of the town, but especially to the people belonging to the navy. The characteristic symptoms of this epidemic fever were, black and yellow vomiting, yellowness of the eyes and skin, gangrene of the feet, hands, face, throat, ears, back, and genitals. It was so contagious that during the three days after the arrival of the patients on shore, not fewer than six surgeons and sixteen female nurses were attacked by it. Emetics, opium, wine, cleanliness, and fresh air were the most beneficial means employed. By strict seclusion of the sick, scrupulous attention to cleanliness, and burning the linen clothes of the infected and the dead, the disease was hap-

pily arrested after a course of four months, during which, one thousand seven hundred and sixty-six patients had been admitted into the Naval Hospital. We do not know of any recent epidemic of *typhus fever*, the disease being almost always sporadic.

There have been many epidemics of *small-pox* in Copenhagen, and throughout Denmark. Before the introduction of cow-pox Copenhagen was many times infected by this scourge, it being known earlier here than in Sweden. Small-pox is mentioned as having been prevalent in the year 1528, while the deaths from this cause—

From 1750 to 1759 were 4059
..... 1760 ... 1769 2208
..... 1770 ... 1779 1288
..... 1780 ... 1789 2068
..... 1790 ... 1101 3172

In 1801, vaccination was introduced into Copenhagen; inoculation with the small-pox matter was practised for the first time in the year 1754, and more regularly from 1769. Several epidemics of small-pox carried off one-seventh, one-tenth, and one-fourteenth of the population of the town. After the successful introduction of vaccination into Denmark, and the rules regarding it had been strictly followed, it appeared as if the small-pox would never visit us again. Some cases occurred in 1818, (one hundred and thirty nine, of which number thirty-three died,) but did not spread farther, and the fullest confidence existed in the efficacy of vaccination. It was only at a distance that we heard of vaccinated persons having been attacked by small-pox, when, in December, 1823, a foreign

vessel brought the disease again amongst us, and it continued epidemic during fourteen months, till March, 1825. In this epidemic four hundred and forty-eight persons were attacked, of which number forty died; *many vaccinated* persons took the disease, but always in the modified form, and none of these died, while several not vaccinated had it in the most malignant form and died. In four cases (boys of four, six, ten, and eleven years old,) the cow-pox and small-pox occurred at the same time in the same individual. The fear of the disease had already ceased entirely, when it again broke out in Copenhagen, in September, 1825, being imported by a soldier from Aalborg in Jutland, where it prevailed at that time. It continued to rage till the summer of 1827, being not only more extended than the former epidemics, but also more dangerous, so that many more were attacked severely; the number of deaths was thirty-five out of six hundred and thirteen cases. All the patients were carried to the hospital erected for the purpose of receiving small-pox cases, where the strictest quarantine was kept; but these arrangements seemed to be of no avail in arresting the progress of the disease. Four hundred and thirty-eight of the patients were vaccinated persons, with whom the disease was extremely modified, but of whom, nevertheless, two died. The greater part of the vaccinated who were attacked, were above ten years and under twenty-five years of age. The disease was also modified in twenty-two cases of unvaccinated persons, which proves that the modified small-pox is no new form of this disease. During seven months, from August,

1827, to March, 1828, no small-pox occurred at Copenhagen; at the end of this month five patients with it were treated in the Military Hospital, when, from September, 1828, the disease again spread epidemically, and raged till June, 1830, during which time five hundred and fifty-seven patients were treated in the Small-pox Hospital. Of these one hundred and eleven had the genuine small-pox, of which number twenty-nine died, (one in four); eighty-one had not been vaccinated, and of these twenty-four died, (one in three and a half); twenty-nine were considered to have been vaccinated, and of these only four died. Of those vaccinated who were attacked, there were none younger than four years and a half; *the most part had been vaccinated in the first years after the universal introduction of vaccination; the younger the patients were, the more modified was the disease; no vaccinated child died,* and in no one of the children were such scars left as were often observed in adults. From July, 1830, at which time the last patient had left the hospital, no case of small-pox occurred during eight months; and in 1831 only six cases were observed; but in May, 1832, an epidemic again broke out, and since that time the small-pox has continued to rage until now, thus forming the longest epidemic which we have had since the introduction of vaccination. One thousand and forty-five patients have been admitted into the hospital; of these, forty-four have died: one hundred and forty-seven were not vaccinated, of which thirty-four died; eight hundred and ninety-eight were vaccinated, and of these ten died. The results of the observations made during this epidemic are the following:—

1. The lymph used for the inoculation of cow-pock must be considered of the same efficacy as it always was.

2. Children cannot be vaccinated too early after their birth, and the earlier they are vaccinated the better.

3. *The prophylactic power of the vaccine gradually decreases, and, after the course of some years, ceases entirely, with the greatest part of the vaccinated.*

4. *The character of the cicatrices after vaccination is in no proportion to the greater or less modification of the small-pox.*

5. The influence which time has in diminishing the protective power of vaccination is likewise proved by the modification of the small-pox, which, upon the whole, is much more considerable in children than in adults. The general rule is, consequently, the younger the subject, the greater the modification, and the milder the disease.

6. The genuine form of the disease amongst vaccinated individuals, has only manifested itself in those who had completed their fourteenth year.

7. Of ten vaccinated who died of the disease, not one had reached the twenty-third year.

8, The disease occurs often in so modified a form that *no exanthema at all is formed,* and only fever, headache, &c., are observed.

9. Of *re-vaccinated* persons no one has hitherto been attacked by the disease.

10. Some cases of small-pox occurred even in very pock-pitted persons.

11. The before-mentioned abolition of the quarantine laws as to the small-pox has not caused any

spreading of the disease. It is, on the contrary, to be hoped that when once all who are susceptible shall have been attacked, the disease, which has always hitherto been lurking amongst us in consequence of its concealment, will cease entirely.

As to the mode of treatment of the small-pox experience has taught the Danish physicians that but little medicine is required, it being in mild cases wholly superfluous, and in dangerous and malignant ones of no essential efficacy. Active anti-phlogistic remedies may perhaps be serviceable before the exanthema has broken out, with the view of diminishing the number of pustules; but after the eruption has made its appearance, the physicians of the Small-pox Hospital have found these remedies quite inefficacious. In confluent small-pox, where it is important to produce a complete suppuration, *opium* has always been found beneficial; and in order to prevent the small-pox from dangerously attacking the eyes, and, as has been often observed, destroying the sight for life, a very simple and efficacious method of treatment is, to keep up *a continual application of cold water upon the eyelids.* As soon as pustules are observed on the eyelids, pieces of linen, dipped into cold water, are applied on the eyes, and changed as soon as they get warm. The late Dr. Moke, who was physician at the Small-pox Hospital, observed several cases of blindness as a consequence of small-pox in the first epidemic; but he had not at that time, commenced the above-mentioned mode of treatment; in the second and third epidemics he employed it, and perfectly succeeded in preserving

the eyes of *all* his patients. Dr. Moke does not think that blindness, as a consequence of small-pox, originates in pustules on the cornea ; he believes this to be a very rare occurrence, but he thinks that the lesion of the cornea arises from the pustules on the eyelids being allowed to suppurate and ripen into the formation of crusts. The eyelids are thereby closed completely, and the matter from the broken-up pustules, which have their seat at the corner of the eyelids, is then deposited on the cornea, and corrodes it by its acrimony. For this reason the advice of Frank, Ludwig, and Nicolay, to leave the eyes to nature, and not to prevent the eyelids from conglutinating, should not be followed. Beer's recommendation to open the pustules before they are ripe, and evacuate the matter, is better, but is inapplicable in cases of confluent small-pox, where crusts are formed before the pustules contain matter enough to be opened. By preventing the pustules from getting ripe however, the eyelids will never conglutinate. Cotunni made the observation that the pustules of small-pox never thrive on a humid surface, and, hence though many pustules may appear on the tongue and on the palate, not a single one will suppurate or form crusts. By producing a perpetual artificial moisture on the eyelids, the pustules are thus prevented from proceeding to suppuration and incrustation, by which simple mode of treatment the eyes may also be observed and cleansed during the whole course of the disease. The *methode ecrotique* of the French, which consists in moistening the pustules with a solution of nitrate of silver, has been tried here, but not found safe. Laxatives,

commenced when the pustules begin to dry on the face, and repeated every third day, is a practice recommended by many physicians of the old school, the intention being thereby to evacuate the absorbed matter, and thus to prevent metastases, but the practice here has been found of no avail. Metastases have been observed even when laxatives were given, and have not occurred, although these remedies were omitted; indeed the laxatives may perhaps rather be injurious than beneficial, retarding, as they undoubtedly do, the state of convalescence.

Chicken-pox is very often epidemic in Copenhagen, and is especially common during epidemics of small-pox, and, of course, principally amongst children. The only point of importance here to be noticed, is the fact of its being occasionally confounded with the modified small-pox in vaccinated persons. According to the experience of the Danish physicians, the identity of these two diseases must be denied, although they may easily be confounded. Professor Hoppe, town-physician, has, in this respect, remarked a diagnostic sign by which we may be able at all times to establish a correct diagnosis. In the genuine small-pox a proportionally greater number of pustules occurs on the face than on other parts of the body, and this is also observed to be the case with the modified form of this disease; but the reverse is the case in chicken-pox, which in particular attacks the forehead. The pustules of the modified small-pox will, consequently, *always* be found more numerous on that part of the face which is below the eyebrows, than upon any other part of the body of the same extent of surface, while

the pustules of the chicken-pox *never* will be in so great a number on the above-mentioned part of the face, as on the back, the loins, and the belly.

Scarlatina is rather a frequent disease in Copenhagen; sporadic cases occur at all times, but very often it reigns epidemically, for the most part every fourth or sixth year. The different epidemics vary much in severity, being sometimes very mild, but occasionally malignant, mostly on account of an accompanying malignant sore-throat. The most recent epidemics which we have had were in 1827–28, and from the end of 1832 till the beginning of 1835. The former of these was mild, although fatal in some cases; but the latter, which was of unusually long duration, was very malignant, and carried off an exceedingly great number of children. In the year 1832, one hundred and sixty-seven, and in 1833, one hundred and eighty-two died of it. From the list of the poor attended at the public expense, it appears that in 1833, eight hundred and twenty-three had suffered from exanthematous diseases, of which two-thirds were affected with scarlatina, and in 1834 the number attended was no less than one thousand six hundred and sixteen. It even proved so fatal in the last epidemic, that it often carried away all the children in a family, and in one family four children fell victims to it in the course of six days.

The epidemic scarlet fever of Copenhagen is also very contagious, and, upon the whole, we do not know any disease more dreaded by parents than this. Its dangerous nature manifests itself soon after the attack, by vomiting, or malignant sore-

throat arising during its course. The common consecutive diseases of scarlatina, as swelling of the parotids, dropsy, hydrocephalus acutus, &c., are rarely much dreaded, and do not frequently occur, a circumstance which, however, depends more upon the epidemic character of the disease than upon the treatment. This consists, according to the nature of the epidemic, in the employment of antiphlogistic means, (leeches, laxatives, nitre, acetate of potassa, &c.,) or of diaphoretics, (camphor, acetate of ammonia, &c.,) but most frequently remedies of the former class are employed, the disease, for the most part, manifesting itself in a true inflammatory form. Against the sore-throat, besides leeches, emetics are often used with efficacy, and a gargle of an infusion of cayenne pepper; in the malignant sore-throat, (*angina maligna gangræ-nosa,*) a gargle of *mixtura camphorata acida* and *decoctum chinæ acidum* is often used. Calomel is also frequently employed, particularly when the brain suffers. Belladonna has several times been given a fair trial as a prophylactic against the scarlet fever, but it does not seem to be of any particular efficacy, and is, consequently, not much used now.

Measles.—This disease is only epidemic with us, and prevails at very uncertain intervals, particularly when humid and foggy weather lasts for a long time in the autumn and winter. It is seldom malignant or dangerous here, yet in the last epidemic of the winter 1835–36, in which the disease spread rapidly, and was very benign and mild at the beginning, it became very dangerous in the sequel, so that as many as one hundred and ten died of it in the course

of the year 1835. It is commonly treated with mild diaphoretic medicines and a warm regimen; our favourite remedy, camphor, is most frequently found beneficial.

Nettle-rash does not occur frequently, and is always without danger, so that scarcely any medicine is required.

Puerperal fever is a disease which now and then reigns epidemically, but more particularly in the Lying-in Hospital, where the contagious nature of the fever is put beyond all doubt. It mostly proves fatal; in 1835, twenty women, and in 1836, thirty-four died of it; and we have lately, in the spring of the year 1837, had an epidemic, which was very malignant. It commonly breaks out on the fourth or fifth day after delivery. For the most part the disease is characterised by symptoms of peritonitis, but occasionally of metritis, and sometimes no local inflammation seems to be present, the danger of the fever appearing to depend only upon the unfavourable conditions of the puerperal state. On examination of the bodies, the peculiar extravasations so often described are found covering the peritoneum and the womb. The mode of treatment employed by the Danish physicians in this fever consists in emetics, which always prove beneficial, leeches to the abdomen, repeated venesection, a mixture of *spiritus vitriolis* and *calomel cum opio*. Leeches, and calomel and opium in large doses, are, I think, used with the best results; laxatives (except castor oil,) and oil of turpentine, either externally or internally, are rarely used.

Catarrhal fever must be noticed under the head

of the epidemic diseases, as well as under that of the endemic, belonging as it does, to both classes. The *epidemic catarrhal fever, influenza* or *la grippe,* is of course much favoured by the climate and weather of Denmark, and we may, consequently, be sure that when it prevails anywhere, it is not long before it reaches us. We have had many epidemics of influenza; the last were in the spring of 1833, and the winter of 1836–37, when it visited all Europe. Both these epidemics spread very rapidly; in 1833, one thousand eight hundred and sixty-four only of the poorer class of patients suffered from it; but the last epidemic attacked most of the inhabitants of Copenhagen. The influenza is, however, with us usually without danger, and is characterized merely by the common symptoms of catarrhal fevers. It is only dangerous to old people and phthisical subjects, or to those who already suffer from chronic pectoral disease, in whom it sometimes proves fatal. But although it is seldom that anybody dies of the influenza alone, yet the mortality, upon the whole, is increased during such epidemics, from which we must conclude that it has a noxious influence upon other diseases. The last influenza, in the winter of 1836–37, which proved so dangerous in other countries, and in Scotland and England was in many cases fatal, was, as usual, unattended with danger with us. It began in December, 1836, almost suddenly, before we had heard of it elsewhere; the tidings of its being prevalent in Russia did not reach us until we had it ourselves, and shortly after we heard of its occurrence in London, Glasgow, Berlin, Hamberg, &c. It is commonly treated with

success with mild diaphoretic remedies, (*camphor, flores sambuci,* and muriate of ammonia,) combined with a warm regimen.

Hooping-cough occurs frequently, but after very uncertain intervals, and does not seem restricted to any particular season. The frequency of this disorder, particularly amongst the lower classes, appears from the reports on the diseases of the poor treated at the public expense: in 1833, two hundred and thirty-two,—in 1834, five hundred and forty-five,—in 1835, one hundred and twenty-four,—and in 1836, one hundred and forty-five, exclusively amongst this class of population, were attacked by it. It runs its usual course here, as in other countries, in spite of the remedies prescribed, but it is rarely dangerous or fatal in its uncomplicated form, except to young and scrofulous children; it appears, however, that in 1833, thirty-four,—in 1834, thirty-two,—in 1835, seventeen,—and in 1836, twenty-eight died of it. The mode of treatment does not differ from that followed in other countries; emetics and mild anti-spasmodics (*moschus, ipecacuanha,* and in cases of adult patients, *opium,*) are most frequently used, belladonna scarcely ever. In the uncomplicated form the disease may be left to itself.

Croup occurs almost every year in the winter and in the early part of the spring, particularly when easterly winds prevail; but it is mostly sporadic, and attacks principally the children of the poor, who do not pay sufficient attention to their clothing and to the avoiding of cold. If it is not met with active treatment in the very first onset of the attack,

it proves usually fatal; in 1835, forty-one,—and in 1836, twenty eight children died of it. It does not appear to be very contagious. The common mode of treatment in Copenhagen consists in leeches over the trachea, emetics of tartarized antimony, a blister on the neck, and calomel, gr. i–ij., every hour until the abatement of the disease. If these remedies are employed immediately, the fatal result of this dangerous disease is often averted.

Mumps are by no means a frequent epidemic disease in Copenhagen, or if so, a very insignificant one; when treated by a warm regimen, they are soon cured without any metastasis.

ENDEMIC DISEASES.

Ague.—Surrounded as Copenhagen and all Denmark is by water, salt and fresh, and situated as the former is, in a low and flat country, containing much stagnant water and many ditches, it is no wonder that ague is a very common disease. In spring and autumn, and particularly in March, April, and May, when the snow is melting in the fields round the town, and when, at the same time, the weather changes every day from warm to cold, from sunshine to hail and rain, many people are attacked by it. Yet this disease is much less frequent now than formerly, which must be attributed to the draining of several pools and stagnant waters. The ague was at one time, from the want of proper drainage, extremely frequent, and in many cases fatal on the island of Langland. It manifests itself commonly in an uncomplicated form, and is scarcely

ever very obstinate or dangerous. In 1835, only one case of death from this cause is reported,—in 1836, none at all. The tertian form is the most frequent, the quotidian less so, and the quartan very rare. The character of the disease is commonly gastric; nor does it usually leave any secondary disease, as, for instance, obstructions of the liver, or of the spleen; but it is, on the other hand, very prone to return every subsequent year in the case of those who have once been attacked by it, which undoubtedly depends upon the very changeable climate. The remedies used by the Danish physicians in ague are the usual emetics, digestives, (particularly muriate of ammonia,) the bark, sulphate of quinine, &c.; in general the specific febrifuge (commonly the quinine salt,) is not prescribed before three or four fits of the ague have taken place, a delay that might be dispensed with when no gastric impurities are present, which often arise by thus waiting for paroxysms.

Catarrh must be considered an endemic disease in Copenhagen, where climate and weather in the highest degree disposes the inhabitants to it: it is especially common in winter and in spring, but is also prevalent throughout the year. It usually manifests itself by cough and coryza, and it is only in particular cases, when fever supervenes, that it calls for medical interference, but it often lays the foundation of phthisis and other intractable diseases.

Rheumatic fever, acute and chronic rheumatism, and *gout,* in all their different forms, are from the same reasons as above mentioned, and others before noticed, the most common diseases with us

at all ages and in both sexes. They are observed throughout the whole year, even in summer. Thus amongst the poor, we find in the reports for the year 1833, no less than one thousand eight hundred and sixty-four,—for 1834, one thousand two hundred and sixty-seven,—for 1835, one thousand three hundred and forty-three,—and for 1836, one thousand four hundred and fifty-four patients treated for *catarrhal and rheumatic fever.* The chronic form of rheumatism is more common than the acute; both forms, however, are more obstinate than dangerous, and metastases are comparatively rare. The remedies used are those usually employed in other countries. Colchicum has had a fair trial, and has been found of great efficacy in the true gout, and in the various evils arising from it. The Russian vapour baths lately introduced among us, and daily coming into more extensive use, and the new establishment for *artificial mineral waters* will, we hope, tend to diminish these diseases. This is perhaps the most convenient place to mention that *hæmorrhoids*, which may be considered as another form of gout, or as depending upon causes which, under certain circumstances, produce gout, are extremely common in Copenhagen. *Stone* in the kidney and bladder, also originating in the same causes which under other conditions give rise to gout, is much less frequent here than in other countries, although it is commonly asserted that those countries which have a low situation bordering on the sea, and a humid climate, are particularly exposed to this disease. In 1835, only eleven, and in 1836, no more than six are stated to have died from *stone* in Copenhagen.

Scrofula.—This disease is one of the most frequent in Copenhagen, the humid and cold climate, combined with the manner of living, damp rooms, want of sufficient fresh air, &c., of the poor, among whom it is particularly observed, contributing much to render it prevalent. It is likewise, though in a milder form, very common in the families of the higher classes, in whom a dissipated life and syphilitic taint in the constitution of the parents may be admitted as causes. The disease shews itself in various forms, particularly in the form of enlargements of the external glands and curvatures of the spine among the more opulent classes, and of chronic affections of the joints, ophthalmia, cutaneous diseases, scrofulous ulcers, and caries among the poor; in the form of *tuberculous phthisis* it manifests itself among all classes. The prevalence of scrofula is rendered evident by the bills of mortality, and by the tabular reports of the patients treated at the public expense. Sixty-six persons are stated to have died of scrofula in the year 1835, and sixty-three in 1836; but amongst these are reckoned only patients with enlargements of the external glands, and of those of the mesentery, though many more diseases of scrofulous origin (as *phthisis, hydrocephalus acutus,* and a host of chronic diseases) might have been enumerated under this head. Amongst the poor there were four hundred and sixty-six scrofulous patients in the year 1833,—three hundred and ninety-six in 1834,—three hundred and eighty-six in 1835,—and three hundred and eighty-four in 1836. In these numbers, those with *phthisis,* which certainly for the most part has a scrofulous

origin, are not included; nor those with *dropsy* and *cachexia*, which undoubtedly likewise very frequently arise from scrofula, so that if all the diseases which are really of a scrofulous character were summed up together, the number would be much greater. The common external indications of the scrofulous constitution, as visible in the general habit or temperament, are also strongly marked in the Danish people. A form of the scrofulous disease, which is far less common here than in England and France, is the *curvature of spine*, although it may not be easy to judge of its frequency, from its being so often concealed. For the cure of such patients an *orthopedic institution* has been recently founded, which bids fair to equal any similar establishment to be found elsewhere, and is already become celebrated amongst us for its successful cures. The remedies employed in scrofula are scarcely deserving of particular notice: the *oleum jecinoris aselli* has, however, of late been used with great efficacy. Sea-bathing is ordered to the more opulent classes, and is now in great repute amongst them, but, as already remarked, is not so much in use among the poor as it ought to be.

Tubercular consumption.—It is no wonder that this disease is extremely frequent in a country like Denmark, where scrofula is so prevalent an endemic. In fact it is under the form of *tuberculous phthisis*, that scrofula most frequently shews itself, for which the cold, humid, and changeable climate, and the frequency of catarrh sufficiently account. *Phthisis* is so common in Copenhagen, and carries off so many of its inhabitants, that if we were able to

draw exact conclusions from the bills of mortality, it is doubtful whether the disease would be considered more common in England. The following tables exhibit the proportion of deaths from phthisis to the whole mortality, and the proportion of cases of phthisis amongst the poor to the total sick in the same class of population :—

	Dths. from phth.	Total dths.	
In 1833	389	3273	Or about one in eight.
1835	427	3860	
1836	400	2848	
Total	1216	9981	

	Cases of phth.	Total sick.	
In 1833	371	9483	Or about one in thirty.
1834	255	9543	
1835	263	9049	
1836	250	7482	
Total	1139	35557	

The disease is as fatal here as in other countries, and the treatment does not differ in any respect.

I am inclined, with many of my colleagues, to place *hydrocephalus* among the scrofulous affections, attacking, as it does, scrofulous children especially. In 1835, sixty-three, and in 1836, sixty-two deaths are reported from it, so that it is very frequent in Copenhagen. Leeches, cold fomentations, and calomel, are the remedies commonly resorted to, but not with any great effect.

Cholera is a very frequent disease in Copenhagen in the autumn, and undoubtedly arises from cold and eating unripe or too much fruit. It usually assumes an apparently dangerous form, with violent

aqueous diarrhœa and bilious vomiting, accompanied by cramps in the legs; it is however very quickly cured. The *liquor nervinus*, (a solution of camphor in the liquor anod: mineral: Hoffme.) in doses of thirty minims every two hours, with plenty of cold water, was employed by the late L. Bang in this disease with excellent effect. If the disease is very obstinate, tincture of opium is added to the camphor solution.

Dysentery is, on the contrary, very rare with us; it occasionally accompanies diarrhœa and cholera as a symptom, but scarcely ever reigns epidemically.

Scorbutus is now also rare; formerly it was very frequent, but at present it is observed almost exclusively in a prison, where the prisoners are confined, excluded from fresh air, and deprived of exercise a long time before they are judged. When the disease occurs, it is quickly and easily cured by nourishing diet, acids, &c. I find only one death from scorbutus in 1835, and none at all in 1836. The form of scurvy called *morbus maculoso-hæmorrhagicus* (purpura) is very rare; in 1835, two deaths are reported from this disease, and in 1836, one.

Itch must be mentioned amongst the endemic diseases, as depending upon the peculiar habits of the Danish people. It is an extremely common disease amongst the poor, arising from want of cleanliness (a national vice), and unhealthy food. While other cutaneous diseases, upon the whole, occur rarely, itch is observed in almost all poor families; and the greater part of vagabonds, thieves, &c., who are arrested, suffer from it, and are immediately, on being arrested, taken into

the hospital appropriated to them, at the Penitentiary. Being myself physician at this hospital, I speak from ample experience; the greater part of the prisoners, not yet brought to trial, who are sent to my hospital are attacked by itch, as well as by vermin of all sorts. In the reports of the poor we find, in 1833, of nine thousand four hundred and eighty-three patients, not fewer than seven hundred and seventy-seven,—in 1834, of nine thousand five hundred and forty-three patients, seven hundred and fifteen,—in 1835, of nine thousand and forty-nine patients, six hundred and twelve,—and in 1836, of seven thousand four hundred and eighty-two patients, seven hundred and sixty-five were attacked with itch. The wards of the general hospital are annually filled with itch patients, and in my hospital the third part of the annual number of patients are infected with the itch. In 1827, of nine hundred and twenty patients, there were three hundred and twelve,—in 1828, of eight hundred and twenty-one patients, there were two hundred and ninety-four,—in 1829, of nine hundred and twenty-five patients, three hundred and thirty-six,—and in 1830, of one thousand and sixty-six patients, there were three hundred and seventy-one affected with the itch. But if the evil is frequent, it is, on the other hand, not difficult to cure. The treatment does not differ from that in other countries, the *unguentum oxygenatum Allyoni* and the *unguentum ad scabiem piceum* are the most usual ointments employed; internally, a bitter purging tea and *cremor tartari* with *sulphur* are used.

It may be right to mention in this place that an

endemic disease very like the venereal disease, though not identical with it, is prevalent in the northern part of Jutland. This affection may be called a *syphiloid* disease, the Jutland syphilis, &c. As to causes and character, it may be referred to the same class of diseases as *sibbens* in Scotland, *radesyge* in Norway, the syphilitic disease in Courland, *scherlievo* in Dalmatia, and other similar endemic diseases. It has prevailed for some time in several provinces of Jutland, but appears not to have been known or observed before the middle of the eighteenth century, nor to have excited the attention of the Danish Government before the year 1773. It seems to have originated in Funen, and from thence to have spread to the other provinces of Denmark; but the manner in which it arose in Funen, whether introduced from another country, or of spontaneous production, is not ascertained, though it is beyond all doubt that it may arise from true venereal infection. By regulations tending to arrest the disease, and issued from time to time, it has been diminished in Funen, Holland, and the southern and eastern part of Jutland, where it is now very rare. It can only be considered at present as endemic in the northern part of Jutland, in the bailiwicks of Aalborg, Iljorring, and Thisted, and in several places of the southern and western part; yet even there it is greatly on the decrease, in consequence of several judicious arrangements, particularly the establishment of hospitals in the respective towns, and the distribution of popular instructions among the people concerning the most essential symptoms of the disease, and the

manner of its spreading. The symptoms of this peculiar disease are, upon the whole, those of the secondary syphilis. Without any premonitory symptoms, it manifests itself first in the throat, by slight inflammation, which, in a shorter or longer time, is followed by small, hard, deep red, vascular tubercles, or small vesicles, which gradually pass into exulcerations. The ulcers succeeding the tubercles are deeper than those succeeding the vesicles, and when once formed, spread more rapidly, but at length both exulcerations assume the syphilitic appearance; within a few months the uvula, the tonsils, and the soft palate are often destroyed. Caries of the *ossa palati* is not a rare consequence of the spreading of these ulcers; but scars occur only after the healing of very deep ulcers. Sometimes superficial ulcers occur on the inner surface of the mouth, which resemble those of protracted salivation, and may be produced by communication of the disease through spoons, glasses, &c. At the corner of the mouth pale ulcers with elevated edges, a lardaceous base, and discharging a sharp ichor, are observed. The disease begins much less frequently in the nose, which is commonly attacked only by the spreading of the ulcers from the palate. The mucous membrane is inflamed, and discharges an aqueous fluid; ulcers form in the nasal cavity, discharging an aqueous, grey ichor, mixed with blood, and forming crusts; pustules arise, that leave deep lardaceous ulcers and necrosis; the cheeks are likewise often attacked by an inflammatory redness and pustules. Among the most frequent symptoms are *condylomata*, which are most

commonly observed about the anus and between the nates, though they also occur on the labia majora, the perinæum, the groins, the scrotum, and the loins. *Rhagades* are also sometimes observed around the anus. An eruption, often quite isolated, occurs on the skin in the form of red, copper-coloured, or brown spots, which increase until they assume the diameter of from a quarter to half an inch, are for the most part of circular form, and but slightly elevated, and show themselves only *on those parts of the body which are covered with clothes.* Corona venerea is occasionally seen. Two sorts of ulcers peculiar to this disease are observed; the one begins with a copper-red coloured induration of the cellular tissue, of small extent, in all parts of the body, but especially on the extremities; the other sort commences by one or more tubercles, of the size of furuncles, and is situate most frequently on the nates, the back, the shoulders, and the belly, rarely on the loins and legs. Affections of the bones (*gummata, tophi, exostoses*) may occur, but are not frequent, and it is singular *that they are never accompanied by dolores osteocopi.* Buboes are scarcely ever observed.

Many patients suffer from several of these symptoms simultaneously, others from only one at a time, and it is a remarkable fact that the greater number of the patients have a healthy appearance, good appetite, and are in good spirits; when, however, the disease has continued a long time, or is very severe, they grow more or less cachetic. The disease is commonly without complication, though sometimes it is combined with scrofula, and is then

very difficult of cure; otherwise it is not so untractable, and is for the most part curable.

Although there are some symptoms characteristic of this disease, and distinguishing it remarkably from the venereal, as, for instance, the absence of dolores osteocopi, the eruption on the skin on such parts of the body only as are covered with the clothes, scars only in consequence of the healing of very deep ulcers, &c.; yet that which especially distinguishes this epidemic disease of the northern part of Jutland from syphilis, is the *manner in which it originates, and in which it is communicated.* It appears as if a peculiar predisposition, chiefly produced by want of cleanliness, and perhaps also by a certain manner of living, and by the influence of the climate, precedes the disease, and is a condition without which it cannot take root: accordingly, most of the cases we meet with occur in those parts of the country where the greatest poverty and want of cleanliness prevail, and the disease is scarcely ever observed among people of the higher and more opulent orders. The manner in which, under such circumstances, it is communicated from infected to healthy persons, is by the common use of spoons, glasses, tobacco-pipes, clothes, beds, &c. The disease may also be hereditary. Persons affected with it in the genitals are capable of communicating primary symptoms of the disease.

As to prognosis, the disease cannot be cured by nature alone; but the symptoms are seldom incurable or fatal, if not connected with cachexia or hectic fever. Relapses are very frequent, and with old persons and children the disease is more pro-

tracted than with younger persons and those of middle age. The common remedies are *mercurials* after a warm bath, once or twice repeated, and an aperient of calomel with jalap or rhubarb. Mundificants in the form of decoction are combined with the use of the mercurials. In slight attacks calomel, and in obstinate cases and relapses the oxymuriate of mercury is indicated ; but the simple or antiphlogistic treatment of the disease *without* mercury has now and then been crowned with success. The iodate of potassa might probably, considering the character and nature of the disease, prove very efficacious, and ought to be tried.

CONTINGENT DISEASES.

I.—ACUTE DISEASES.

Genuine sthenic inflammatory diseases are, upon the whole, somewhat rare in Copenhagen, scarcely one of twenty inflammations being of this nature. The greater part of the inflammatory diseases that occur, are rheumatic, or nervous, or gastric complications, depending upon the climate, and varying according to the different seasons, and the state of the weather ; rheumatic inflammations are in this manner most common in the spring, nervous ones in the summer, and gastric ones in the autumn. The treatment of inflammatory affections is thus very much modified, and evacuations of blood are not required upon any great scale. The most genuine inflammations occur when a dry frost supervenes in the winter, and an easterly wind has blown for

some time. During the three last years in the first hospital of Copenhagen (the Royal Fredrik's,) there occurred, in 1834, only three cases of encephalitis, forty cases of inflammation of the fauces, eighty-eight of the lungs, four of the stomach, five of the liver, seven of the intestines, and five of the womb; in 1835, only one case of inflammation of the brain, thirty-three of the fauces, one hundred and fifty-one of the lungs, three of the pericardium, three of the stomach, one of the intestines, seven of the peritoneum, and one of the bladder; in 1836, only twenty-seven cases of inflammation of the fauces, one hundred and fifty-two of the lungs, five of the heart, one of the stomach, ten of the intestines, five of the liver, six of the womb, and one of the bladder. It appears from this statement that *pneumonia* and *pleurisy* are the most frequent species of inflammation occurring, and in particular, as remarked, in winter, as soon as a severe frost succeeds to humid foggy weather. There is nothing particular in the Danish mode of treatment of these inflammations, except that we seldom require to take much blood from our patients; one or two blood-lettings, and only twelve ounces each time, being in most cases sufficient. In pneumonia and pleurisy the tartar emetic, (antimonii potassio-tartras,) in large doses, has of late been used with great advantage immediately after blood-letting. Calomel, c. opio, is also often prescribed, particularly in inflammations of the lungs and of the liver, though not so much and so indiscriminately as in England.

Erysipelas, combined with fever or without it, is also uncommon with us. Of *erysipelatous fever*

there were, in Fredrik's Hospital, in 1834, out of two thousand and ninety-seven patients, only twenty-three cases,—in 1835, of two thousand one hundred and seventy-seven patients, none at all,—and in 1836, of one thousand four hundred and fifty patients, only fifteen, and they were all cured.

Bilious fever is the most frequent type of fever in Copenhagen, and occurs during the whole year; *typhus fevers* occur particularly in winter and spring. In order to show the proportional occurrence of these two species of fever, we will again refer to the reports from the Fredrik's Hospital during the last three years. In 1834, there were of *bilious* fever five hundred and fifty, and of *typhus* fever seventy cases; in 1835, of *bilious* fever five hundred and fifty-seven, of *typhus* twenty cases; in 1836, of *bilious* fever two hundred and sixty-three, and of *typhus* seventeen cases.

The *bilious* fever seldom proves fatal, and it is treated successfully by emetics and purgatives; the *typhus* fever is more dangerous, although more cases are cured than prove fatal. Formerly the stimulant method of Brown was employed, but at that time the greater part of the patients died; the late Dr. Herholdt had the merit of introducing quite a different method of treatment against this disease—the *cooling* and *antiphlogistic*, which has proved so efficient, that now scarcely any physician treats his typhus patients in any other manner. Very little medicine is commonly used; a solution of nitrate of potash, or a powder of supertartrate of potash and nitre, leeches on the temples or on the belly, cold fomentations of the head if the brain

suffers, derivants in the neck or on the legs, free ventilation of air, and keeping the bowels open, constitute the whole of the treatment. It was the maxim of Herholdt to take care that the typhus patient had access to fresh air, so that he never inhaled the same air twice, and he consequently always ordered the patient to be laid in a spacious room, with the windows opened, or at the open window itself; but by this plan, followed up even in winter, the patient, by being exposed to constant draughts, often after his recovery from the fever, got some gouty complaint; so that it is now considered sufficient to keep up a free ventilation in the room, and only occasionally to open the windows. Professor Bang, physician at the Fredrik's Hospital, who, on account of his great experience, is one of the first authorities, and, as teacher of therapeutics and clinical medicine, has the greatest influence on all modes of treatment amongst the Danish physicians, employs the following remedies against the typhus fever:—1. *Pure fresh air.* He takes care that a *perpetual stream of fresh air* surrounds the patient, who lies upon a mattress, and is covered only with a thin coverlet, in order that the air from under the bed, which is pregnant with contagion, may be prevented acting as a constant source of fever. The windows are on this account kept open above the beds, which are placed immediately below them, at least as long as the violence of the fever requires this cooling method. 2. *Cold water.* The head of the patient is covered with linen dipt into cold water, and changed as often as necessary; the patient is allowed to drink as much cold water as he pleases, and when

stupor, mild delirium, and other signs of congestion of the brain prevail, the head is placed over the edge of the bed, and several bottles of cold water are poured upon it. If the skin is very hot, now and then the whole body is affused, but more frequently *washed* with cold water. Sometimes, when dryness of the skin coexists with nervous symptoms, *tepid baths* are ordered with the greatest success, in conjunction with cold lotions or cold affusions. 3. Only *cooling* and *mucilaginous drinks* are allowed. 4. *Emetics* are given whenever giddiness and bitter taste of the mouth are observed simultaneously, and whenever they are not contraindicated by true debility, great stupor, or local inflammation, particularly of the organs of the belly; but even when these symptoms manifest themselves in a moderate degree, or are alleviated by blood-lettings, emetics are, according to the experience of Professor Bang, prescribed with the greatest efficacy, particularly in the earlier stages of the disease. 5. *Nitre;* two drams of this salt are dissolved in eight ounces of water, and mixed with two drams of sugar, of which mixture a tablespoonful is given every second hour. Only great and real weakness, a septic state, and diarrhœa, are contraindications to the use of this valuable medicine. 6. *Blood-lettings* are particularly employed when stupor, delirium, and other symptoms of congestion in the head manifest themselves, but they consist mostly in the employment of leeches, or, when these are wanting, in cupping. When the cold affusions do not fulfil the intended purpose, or, where a general plethora excites fear of congestion in another organ after that in the head is

relieved, ten leeches are commonly applied on the head twice or thrice, and when fixed pains or constant disturbance of function in some organ of the chest or belly present themselves, from ten to twenty leeches are applied near the affected organ. 7. *Sinapisms* are constantly applied on the soles of the feet, and if symptoms of congestion in the head prevail, *blisters* are ordered in the neck. 8. *Laxatives* are not so frequently used; when the emetic has not proved aperient also, or only in a slight degree, they are prescribed the succeeding day, and, if necessary, repeated. The laxative now commonly used is sulphate of magnesia or rhubarb, with muriate of ammonia, or castor-oil, or enemata. 9. *Mineral acids* are only used in the later period of the fever, and mixed with cooling drinks, either in order to check noxious excretions, or to cure septic symptoms.

Of the other febrifuge medicines the supertartrate of potash alone or with nitre, and more rarely a solution of the acetate of potash are employed, the last particularly against constant vomiting. Bark, camphor, valerian, musk, ether, &c., are seldom required or used; they are indicated by septic symptoms, and musk is that which affords the greatest aid.

Single symptoms, are of course treated in a different manner; *leeches* and *blisters* are, however, successfully employed against the greater part of them. The dangerous diarrhœas are frequently treated with castor-oil, at first in larger, afterwards in smaller doses, in order to promote the evacuation of noxious matters, then with enemata of infusion

of camomile flowers, and, finally, with leeches if the diarrhœa continues and is attended with pain. Less frequently *blisters* and the *unguentum tartari emetici* are required. As to other remedies, Professor Bang has always observed the greater efficacy of astringent means, when administered by enemas, as, for instance, three or four grains of opium, than when internally given. Mucilage of gum arabic, with a few grains of muriate of ammonia, seem, the least injurious of those given by the mouth. The state of convalescence is commonly left to nature, and such is the happy result of this treatment, that of three thousand typhus patients treated by Professor Bang up to the year 1831, only three hundred and seventy died, including those which were brought into the hospital in a dying state.

Of the varieties of the *typhus fever*, the *cerebral* is the most common in Copenhagen; then the *pectoral*, and the rarest form is the *abdominal*. From December, 1829, to February, 1834, only thirty-seven cases of the last form occurred in Fredrik's Hospital. There is a very valuable essay on the *abdominal typhus* in Copenhagen, by Professor Bang, inserted in the *Danish Medical Journal*,* It appears from this essay that the assertion of the French physicians, that the male sex particularly is attacked by this disease is founded in fact, two-thirds of the cases during the above-mentioned period having been males; it appears likewise from this essay that persons *under* thirty years more frequently suffer from this disease than the more advanced in life, and that the winter months are more favourable

* *Bibliothek for Læger*, Vol. XXI.

to its development than the summer months. Of the thirty-seven patients only sixteen had diarrhœa, twenty had pains, and seven swelling of the belly; only three had the typhus exanthema. Bilious or gastric symptoms were present in all Bang's cases. Of Louis' cases, in Paris, only two-thirds suffered from acute gastric symptoms. Stupor and delirium were almost always present, and weakness always. All the other symptoms were just as inconstant in Bang's patients, as in those of the German and French physicians. The tongue was mostly clean, the urine sometimes turbid sometimes clear, the pulse in one-half of the patients upwards of one hundred and twenty, in seven irregular. The regular progress and decrease of the ulcers in the intestines during the course of the disease, as described by Louis and Trousseau, were not observed in the Danish patients. The ulcers were partly small and circular, either with a clean even base formed by the peritoneum, or with an uneven base, filled with black spots; partly larger, with protuberant and elevated edges, with a reddish elevated even base, the nearer the cæcum, the more irregular, and for the most part of a circular form. These forms, however, were not restricted to certain periods of the disease, nor were the size and the number of ulcers proportioned to the symptoms observed during the course of the disease. Besides the ulcers in the intestines, several other anomalies were observed in the *post-mortem* examinations; the quantity of the bile and the size of the spleen were, for instance, often found increased, and in all the blood appeared thinner and blacker than in the natural state.

According to the experience of Professor Bang, there are no constant diagnostic signs of the abdominal typhus, every symptom indicating an affection of the intestines being often wanting when, after death, many ulcers were found in the intestines, and, *vice versa,* such symptoms having manifested themselves when the intestines were found in a quite normal condition. Bang does not consider the ulcers in the intestines to be a *cause* of the typhus fever; they are, he thinks, a complication produced by a greater development of the glandular system, a scrofulous disposition, and depending mostly upon the epidemical constitution. To this opinion we, for our part, must candidly object, for were it as Professor Bang believes, the abdominal typhus would be more frequent with us than it really is, the scrofulous diathesis being so marked, and scrofula so general amongst the Danes.

II.—DISEASES OF THE BRAIN AND NERVOUS SYSTEM.

Apoplexy is rather frequent in Copenhagen, and, of course, particularly among corpulent and old people. The coldness and humidity of the climate, by which the blood is driven to the internal parts of the body, favour its occurrence, and there even seems to be a certain constitution of the atmosphere which disposes to it,—the disease and death from it being particularly common at certain periods, and not occurring at all at others. It is, however, most frequent in the spring and in the autumn. In the bills of mortality we find, in 1833, eighty-eight,—in 1835, one hundred and seventeen,—and in 1836, one hundred and twenty-nine deaths from apoplexy.

Epilepsy is likewise frequent; in 1833, sixty-one died of it,—in 1835, twenty-one,—and in 1836, twenty-one; but from this mortality no conclusion can be drawn as to the frequency of the disease, it scarcely ever proving fatal, and the sufferers being commonly carried off by other diseases.

Spasmodic diseases are extremely numerous in Copenhagen, particularly among the poorer classes: many children die of convulsions immediately after birth, or in the first year of their existence, during dentition; and the greater number of the females in the higher classes suffer from *hysteria*. In the year 1833 there were four hundred and ninety-one,—in 1835, three hundred and thirty-one,—and in 1836, two hundred and eighty-one deaths from the several forms of spasms; and in Fredrik's Hospital, in 1834, of two thousand and ninety-seven patients, there were sixty-nine,—in 1835, of two thousand three hundred and twenty-four patients, there were fifty-four—and in 1836, of one thousand four hundred and fifty patients, there were forty-four treated for hysteria. *Tetanus*, however, is a very rare disease with us, originating, when it occurs from extensive wounds. During the years 1835 and 1836, only three died of it in Copenhagen. The *trismus nascentium* is likewise rare. Neither are *neuralgic* pains so common as other forms of *hysteria*; but nothing certain can be said upon this subject, as they are commonly reckoned amongst hysteric symptoms. In *prosopalgia*, which is, upon the whole, rather rare amongst us, the subcarbonate of iron has been fairly tried by the Danish physicians, in large as well as in small doses, but without any

particular success; general treatment has been found of more avail than either this or any other single remedy.

Insanity is not of rare occurrence in Copenhagen, though certainly not so frequent as in London or Paris. In 1834, twenty patients afflicted with it were treated in Fredrik's Hospital,—in 1835, thirty,—and in 1836, twenty; but as insane patients are not commonly admitted into this hospital, being for the most part sent to St. John's Hospital, at Bidstrup, no conclusion can be drawn from these numbers, and it is to the reports of the last-named hospital that we must look for further information. The annual number of patients in St. John's Hospital is about from one hundred and fifty to one hundred and seventy, from all parts of the Danish kingdom. From the year 1832 to the year 1836, inclusive, three hundred and sixty-eight patients, two hundred and eleven males and one hundred and fifty-seven females were treated in this hospital, and of this number one hundred and seventy-nine were perfectly cured. There does not appear to be any considerable difference between the married or unmarried patients admitted, for of the two hundred and eleven males one hundred and twenty, and of the one hundred and fifty-seven females eighty-one were unmarried. The greater number of the males are between thirty and fifty years of age, and of the females between thirty and forty. The greatest number of patients enter the hospital in the three hottest months,—June, July, and August; the three autumnal months come next in the frequency of admissions; then March, April, and May; and the

fewest are received in the three winter months. The number suffering from mania during the five years amounted to ninety-five; from monomania during the same period, to forty-five. Abuse of spirituous liquors is the most frequent cause of insanity, fifty-two of the three hundred and sixty-eight being attributed to this source; epilepsy is the next most frequent cause, sixteen of the cases being in epileptics. The seasons do not appear to have any great influence on the recovery or the mortality of the insane; the most frequent cause of death is a general consumption, which commonly begins with diarrhœa. *Suicide,* which mostly originates in melancholia, was formerly very rare in Copenhagen, but has of late increased. In the year 1835, one hundred and ninety-two died by suicide in Denmark; and of these one hundred and ten were married,—eighty-seven males and twenty-three females,—and eighty-two unmarried.

Delirium tremens is a too common disease in Copenhagen, and proves lamentably the abuse of spirituous liquors. In Fredrik's Hospital, in the year 1833, of two thousand two hundred and forty-one patients, ninety-nine,—in 1834, of two thousand and ninety-seven patients, seventy-nine,—in 1835, of two thousand one hundred and seventy-seven patients, one hundred and eight,—and in 1836, of one thousand four hundred and fifty patients, seventy-nine were affected with delirium tremens. Upon the whole, from the year 1826 to 1836, inclusive, of twenty-three thousand seven hundred and sixty-five patients admitted, nine hundred and ninety had delirium tremens, a number which must astonish

the reader the more, when he reflects that this has occurred in one hospital only, and an equal and perhaps still greater number must have been treated in the General Hospital, as well as in the Military and Naval Hospital, and in private practice. Of the poor treated at the public expense, thirty-four suffered from this disease in the year 1833,—thirty-seven in 1834,—fifty in 1835,—and forty-one in 1836. In St. John's Hospital for the Insane, many of the cases of insanity are caused by delirium tremens, amounting to twenty-four of the three hundred and sixty-eight treated during five years. According to Professor Bang's experience, the greatest number of patients with this disease occurs amongst labourers, watchmen, and *literary men*. But if the disease is frequent, it is, on the other hand, not very fatal; of the above-mentioned nine hundred and ninety patients in the Fredrik's Hospital, in the years 1826 to 1836 inclusive, only one hundred and fifty died of it: upon the whole one of sixteen dies if the disease is without complication, and one of four if complicated. The disease occurs with us principally between the thirtieth and fiftieth year, very rarely before the thirtieth year, and in much greater proportion in the male sex than in the female. Of four hundred and fifty-six patients seen by Professor Bang, only ten were females; of one hundred and seventy-three seen by Dr. Guldberg the second physician at the hospital, there was only one female, which accords with the experience of other physicians. The disease is particularly observed in the months of May, June, and July, so many cases sometimes occurring at one period

that it seems to be epidemic, a circumstance which shews how changes of the atmosphere are able to influence the outbreak of the disorder. In connection with this, it is to be remarked that delirium tremens occurs principally at the same time when cases of apoplexy are frequent, a fact proving, in both cases, the action of causes that produce congestion in the head. Mental emotions have also been observed to do much in bringing forth the disease. The danger especially depends upon the complication of the disease, and of the various complications, those with typhus fever, with inflammation of the chest and brain, with epilepsy and with phthisis, are observed to be the most dangerous. The most frequent complication here is with a bilious state. The chronic form is attended with greater danger than the acute. Relapses are exceedingly common. The most constant symptoms of the disease, as it occurs with us, are sleeplessness, tremor, and delirium. The remedies that are employed in Copenhagen, and with undisputed efficacy, are blood-letting, leeches, cupping, cold shower-baths, cold lotions, sinapisms, blisters, nitrate of potash, aperients, muriate of ammonia, tartar emetic, sulphuric acid, camphor (seldom), musk (likewise seldom), emetics and opium, varied of course according to the form and duration of the disease, the constitution and temperament of the patient, &c. In the *sthenic* form, leeches to the temples, affusions, and lotions with cold water, have in particular been found useful; nitrate of potash less efficacious; sulphuric acid excellent when delirium is combined with great restlessness, wandering of thought, and

considerable thirst; and tartar emetic very useful in the most different circumstances. In the *asthenic* form, *opium* has been observed to be the most valuable medicine, commonly, however, not in larger doses than from two to ten grains during the whole course of the disease, commencing with one grain, every two hours, and afterwards two grains, the cerebral congestion having been previously relieved by leeches. A white and coated tongue and dyspeptic symptoms do not form any contraindication to this plan of treatment. The sulphate of morphium has been tried several times internally, and after the endermic method, but has not been found of any great avail. Aperients are less frequently used in this form of the disease. In the chronic form, opium and blisters, and, in very obstinate cases, spirituous medicines and valerian are used with the best results. It was formerly thought beneficial not entirely to deprive the patients during the disease of their customary stimulant, spirits, but of late this practice has been abandoned.

Chorea is rather a rare disease with us, occurring, as in other countries, about the age of puberty. In the year 1833, only one patient was treated for it in Fredrik's Hospital,—in 1834, three,—in 1835, three,—and in 1836, none. The remedies are those usually employed.

III.—DISEASES OF THE CIRCULATING SYSTEM.

Pericarditis and carditis are rather rare diseases in Copenhagen, which is to be wondered at, considering the frequency of rheumatism and its known

tendency to affect the heart. In 1833, two only died from these diseases in Fredrik's Hospital,—in 1834, three,—in 1835, three,—and in 1836, two; but in the last year, five cases are reported cured.

Diseases of the heart, as hypertrophy, dilatation, ossifications of the valves, &c., are not very common, but owing to the cold and humid climate, sympathetic disorders of the heart, as palpitations, and intermittent or irregular action of the heart, are often met with in gouty and hysteric persons, in patients with piles, &c. From diseases of the heart we find eighteen deaths in 1835, and thirteen in 1836.

Aneurism and phlebitis are likewise rare. Of aneurism only two persons died in 1835, and none in 1836.

Chlorosis is, upon the whole, not so common here as in England. In the year 1833, four chlorotic patients were treated in Fredrik's Hospital,—in 1834, five,—in 1835, six,—and in 1836, nine.

Hemorrhages also are not of frequent occurrence. In Fredrik's Hospital, of seven thousand nine hundred and sixty-five patients during the years from 1833 to 1836, only seventeen were treated for hemorrhage from the lungs, twenty-five for hematemesis, and thirty-one for menorrhagia.

IV.—DISEASES OF THE RESPIRATORY SYSTEM.

Of these diseases the principal ones have already been mentioned, as cattarrh, croup, hooping-cough, pneumonia, pleuritis, and phthisis, and it only remains to remark, that *œdema glottidis* and the

asthma millari are very rare diseases here, and that *asthma* seldom occurs as an idiopathic disease, but mostly as a sympathetic or secondary affection in old people, or in dyspeptic and dropsical patients, or as a symptom of inflammatory affection of the organs of the chest.

V.—DISEASES OF THE DIGESTIVE SYSTEM.

Genuine inflammatory diseases are, as remarked above, not frequent in Copenhagen ; genuine *enteritis* and *peritonitis* occur very seldom, but the chronic forms of these diseases are more frequent, giving rise to the whole train of dyspeptic symptoms on the one hand, and to serous effusions on the other. *Gastrodynia* is especially met with in hysteric women. The *painter's colic, ileus, intussusceptio, intestinal concretions, cancer ventriculi, prolapsus ani,* and *stricture of the rectum,* are all very rare diseases amongst us. Only one death from *volvulus* is reported in 1835, and one in 1836. *Rupture,* however, is extremely common in Denmark, and much more so than it was formerly, arising undoubtedly from our present manner of living, want of sufficient bathing and friction of the body in infancy, &c. There were seven deaths from *incarcerated hernia* in the year 1835, and thirteen in 1836. *Intestinal worms* are very frequent in children, though seldom combined with fever, the symptoms which they produce being upon the whole of no consequence. Only four children are stated to have died from *worms* in 1835, and three in 1836. *Tænia* is not frequent.

Diseases of the liver and spleen are not common; enlargement of either of these organs seldom supervenes on our intermittent fevers. Thirty-three deaths are reported from hepatic disease in 1835, and thirty-three in 1836. *Jaundice* and *gall-stone* are also infrequent.

VI.—DISEASES OF THE URINARY AND GENITAL ORGANS.

Inflammations of the urethra, bladder, and *kidneys,* are in their genuine form rare in Copenhagen, but in the chronic form the two first named organs often suffer in gouty persons and in patients affected with piles, producing either a discharge of blood or of mucus. *Gonorrhœa* is a common disease, but is very rarely connected with syphilis or inflammatory symptoms, so that the specific medicines, balsam of copaiva and cubebs, may be ordered safely from the commencement. It is proper to remark that the *cubebs* have been fairly tried in gonorrhœa by the Danish physicians, but that they are not found of any great efficacy, which may perhaps depend upon the inferior quality of the drug, or upon its being kept too long. *Inflammatory diseases of the womb* are likewise very rare in Copenhagen. Mention has already been made of the *malignant puerperal fever,* but I must here notice a peculiar sort of *acute gangrene* of *the genitals* which has not been described fully by any author on midwifery, though it has been several times observed in the Lying-in Hospital by Dr. T. Y. Saxtorph. It consists in a swelling of the female genitals, sometimes combined with ulcers

of a specific nature. These ulcers have a lardaceous base and elevated edges, begin with an excoriation, and have a syphilitic appearance; they spread rapidly to the surrounding parts, and within the course of twenty-four hours may pass into *gangrene*, dangerous to life. The gangrenous crust soon separated, but the ulceration spreads at the same time down the loins, increasing considerably in size. The affection neither arises from, nor spreads by contagion, nor does it seem to be epidemic: it is observed as well at times when the malign puerperal fever is epidemic, as at other times, attacking often only single persons, without infecting others lying in the same ward, and occurring as well in wards where many lying-in women are confined to bed, as where patients are lying by themselves. It arises as well after natural births as after laborious ones, and when artificial interference is employed to deliver the child, and the genitals have been exposed to pressure or irritation during parturition. It is often met with in patients suffering from dangerous puerperal fever, manifesting itself in such cases as a metastasis when the other alarming symptoms are on the decrease or have vanished entirely; in other cases, however, the fever does not decrease in the least degree, but rather increases, the signs of collapse, which usually accompany gangrene during the fever, presenting themselves. Sometimes also a very inconsiderable fever or no indisposition at all precedes. The ulcers develop themselves very rapidly, often during a night, without any local affection having been previously observed, and

occur in general on the inner surface of the labia majora, on one or both sides, but are always very clean, having, as remarked, the appearance of syphilis. Saxtorph was at first of opinion that the gangrene arose from want of proper care and cleanliness, but repeated investigations as to these points proved the incorrectness of this view. The nature of the affection, its rapid spreading, and its occurrence in persons quite free from any suspicion, prove also beyond doubt that the syphilitic miasma has no part at all in the disease. The best remedy against it, is invariably found to be the *yellow wash*, aqua phagedenica, which possesses a specific virtue in arresting the further spreading of the ulcer, and in most cases effectuates a complete cure. It is an important and remarkable fact, that this peculiar species of acute gangrene is scarcely ever, if at all, observed in the town, and that it only occurs in the lying-in hospital. Saxtorph has never observed it in his extensive private practice. This curious disease is only noticed very briefly by Ritgen Meisner, &c., and slightly mentioned by Jörg and Bartels. Jörg describes it as a disease seldom combined with fever, occurring also in private practice, and he recommends the usual anti-gangrenous means against it. Bartels, who saw it for the first time during an epidemic puerperal fever in Vienna, calls it an epidemic, contagious and very dangerous disease, which according to him does not limit itself to the genitals, but occurs in other parts of the body.

Chronic leucorrhœa is a very frequent disease in Copenhagen in hysteric women, arising perhaps

from the great abuse of tea. *Polypi*, retroversion of the *womb*, and *hydatids*, are rare; *prolapsus uteri* and *vaginæ* occur more frequently.

Diabetes is an extremely rare disease with us. In the last four years not a single diabetic patient has been treated in Fredrik's Hospital; and in the same number of years not one death from this cause is noted down in the bills of mortality.

Syphilis is of course rather common in a metropolis and commercial city, yet it is certainly not so frequent as in other large capitals and sea-ports, and the symptoms are, as everywhere at present, uncommonly mild. The greater part of the syphilitic patients amongst the lower classes are admitted into the general hospital, where also all the infected public girls are brought in. The annual number of syphilitic patients treated in this hospital, is about three hundred, two-thirds of these being prostitutes. The Danish physicians in general, as yet, treat syphilis with mercury, particularly with calomel, but usually not to salivation; as soon as the least sign of ptyalism manifests itself, the medicine is discontinued, and not given again until those signs are gone. Some physicians have of late begun to treat syphilis *without* mercury, among others Professor Wendt, physician of the General Hospital, Dr. Müller, Dr. Svitzer, and the writer of this article. I was the first who, twelve years ago, after my return from England, turned the attention of my medical countrymen to this mode of treating syphilis, by a paper read before the Royal Medical Society, and afterwards inserted in the *Bibliothek for Læger*, and I was likewise the first who gave it a fair trial in

the hospital at the Penitentiary. The results which were published proved the value of the method, even beyond expectation, so that I now never use mercury against syphilis, effecting a complete cure of all its forms within a much shorter time than was formerly done by mercury, and without seeing secondary symptoms arise afterwards. Professor Wendt, Dr. Müller, and Dr. Svitzer, have been equally successful with this mode of treatment; though they think that there are forms of syphilis which require mercury, and, consequently, now and then employ it. I frankly confess that I have not seen such cases.

The *primary affections* after an impure coitus, blenorrhœa glandis, incipient ulcers, gonorrhœa, vesiculous herpes, &c., originating in a mechanical irritation, accumulation of acrid mucus in the vagina, &c., are quickly cured by injections of astringent medicines, as of aqua calcis, or a solution of twelve grains of acetate of lead in six ounces of water. If the prepuce can be moved forwards and backwards without pain, it is better only to *dip* the parts into one of the above-mentioned fluids. The *small chancres* are cured within a very short time by being touched with a piece of nitrate of silver, which is carried to the bottom of the ulcer, and several times turned slowly round, by which the whole ulcer is sufficiently corroded; the ulcer is then covered with lint and linen, spread with unguentum martiale. In about two days the parts are washed morning and night, with one of the above-mentioned astringent solutions, and covered with linen moistened with it, and after the lapse of three or four days the

chancres are either entirely healed, or at least clean and even, a repetition of the caustic being seldom required in order to perfect the cure. The *herpetic vesicle* is very easily cured by a solution of acetate of lead, applied on linen twice a day. *Gonorrhœa* is left to itself until the stage of relaxation, when it is checked by balsam of copaiva or cubebs, and if the discharge becomes chronic, the glans is washed, morning and evening, with a dilute solution of acetate of lead, the patient trying to introduce a little of the solution into the orifice of the urethra. The cure of patients with more developed symptoms, as large chancres, phimosis, condylomata, buboes, &c., takes usually from six to eight weeks or more.

Phimosis, caused by ulcers or other local diseases of the prepuce, is treated by rest, diet, horizontal position, lotions with cold water, solution of acetate of lead, or the fotus resolvens, according to the constitution of the patient and the nature of the inflammation, by injections beneath the prepuce, and by epsom salts internally. By this treatment the pains usually cease, and the swelling decreases so much that the prepuce can easily be drawn back; if not it is slit up or circumcised, and the chancres that are found, touched with nitrate of silver, so that a complete crust is formed. If the ulcers get clean by this mode of treatment, they are safely but slowly cured by one of the above-mentioned astringent fluids, or by the *black wash*; but if the ulcers from the beginning are very large and superficial, or if there are many small ones, the nitrate of silver is dispensed with, and lint, anointed with acetate of copper and olive oil is applied with the greatest

advantage. The *condylomata* are treated in a different manner. Those that have a narrow pedicle are tied with a silken thread, which is tightened until the ceasing of the pain, when the thread is shortly cut off. After the lapse of two or three days the condyloma falls off, and the small wound heals rapidly. Condylomata with a large base are easily corroded away by the nitrate of silver, applied long and firmly; but the dry and warty condylomata must be treated with a stronger caustic, as the spiritus nitri fumans, applied by a thin wooden pin, the point of which is introduced between the fibres. As soon as the condyloma assumes everywhere a white colour, the application is desisted from. When the first crust is fallen off, the wound is healed within three or four days, but the part is then examined minutely with a microscope, and if a return of the condyloma is to be feared, the even surface will be found covered with small light red points, and the above-mentioned treatment is then repeated, and continued steadily until no more points appear on the part. This mode of treating condylomata is crowned with the most perfect success.

Condylomata ani are, if soft, treated with *oleum martis*, with which they are touched morning and night, and then covered with lint and a T bandage; and, if hard, with spiritus nitri fumans, or muriate of antimony. For the most part the disease is completely cured by this treatment, but if not, calomel is used until an incipient ptyalism appears.

Buboes are usually prevented from developing themselves by the above-mentioned local treatment of the ulcers; if they are very sore they are treated

with leeches, and if not, with emplastrum resolvens, which is continued until the gland has assumed its former volume, or only a small swelling remains; but if the skin beneath the plaster becomes covered with small red pustules that itch and burn, a poultice of camphor is more efficacious. *Chronic, hard, and indolent buboes,* are treated by local irritant remedies; if they then tend to suppuration, common poultices and emplastrum gummosum are used, and when fluctuation is perfect, they are opened by a longitudinal incision with the lancet, and a sponge is laid between the gaping edges, by which these are shortened and thickened. The poultices are not to be continued after all tenderness is gone, otherwise the suppuration is maintained, and the skin destroyed, but must then be changed for stimulant plasters and ointments If, nevertheless, a gangrenous suppuration of the skin supervenes, that part of the skin which is destroyed, is taken away with a pair of scissors, and the stimulant ointment prescribed. If the edges of the ulcer become callous, the unguentum martiale is employed, and if a thin ichor is formed, the infusum nicotianæ is used with the best results.

Swellings of the testes, consequent on the stopping of a gonorrhœa, are treated with leeches, and emollient poultices, by which the gonorrhœa often returns; if only some hardness remains after this treatment, a poultice with camphor is used.

Rhagades are treated successfully with poultices and the linimentum ad ambustiones. (*Aqua calcis* and *ol. lini.*)

Chancres in the throat, which are rarely purely

venereal, are, if very sore and inflamed, treated with leeches and emollient poultices applied round the neck, and by emollient and astringent gargles and saline aperients; but if they are torpid and spread, they are touched upon their whole surface or partially with nitrate of silver, or with a powder of calomel mixed with water, under which treatment they very soon get clean, and are then healed by mel despumatum, myrrh, &c.

The *venereal cutaneous affections* are treated with pulvis alterans or calomel, and in obstinate cases by the hunger-cure and calomel. Mercurial ointments are only employed when the affection is limited to a particular part of the skin.

Inflammation of the periosteum is successfully treated with leeches, emplastrum resolvens, applied very firmly, and aperients.

Of late *hydriodate of potash* has been tried by several Danish physicians in the secondary forms of syphilis, and also by Professor Wendt, and the trials of the remedy have satisfactorily verified the assertions of Dr. Wallace.

VII.—DISEASES OF THE SKIN.

Diseases of the skin have been already treated of; *itch* is the only one that is common. Old *ulcers* on the legs are very frequent, and treated in the usual manner.

Of other *chronic diseases* I have nothing to remark. In 1835 fifty-two, and in 1836 thirty-eight deaths are reported from *hydrothorax;* in 1835 only one, and in 1836 four from *ascites:* but of *general*

dropsy one hundred and twenty-three deaths are noted dead in 1835, and seventy-one in 1836. Of the poor, treated at the public expense, there were in 1833, two hundred and fifty-two,—in 1834, two hundred and eighty,—in 1835, twenty-five,—in 1836, one hundred and eighty-two patients with *dropsy* and *cachexia;* but from other chronic diseases (certainly a very vague term), there are reported to have suffered, in 1833, eight hundred and one out of nine thousand four hundred and eighty-three patients,—in 1834, eight hundred and fourteen, of nine thousand five hundred and forty-three, —in 1835, six hundred and ninety-eight, of nine thousand and forty,—and in 1836, eight hundred and five, of seven thousand four hundred and eighty-two.

In concluding this imperfect sketch of the diseases in Copenhagen, and the modes of treatment adopted by the Danish physicians, I repeat that, upon the whole, we are extremely cautious, perhaps too much so, in the use of active or heroic medicines. The treatment of the diseases of children is still less active, and I think rightly so. We prescribe of late very few medicines, and our prescriptions are never composed of many drugs; but more regard might be advantageously paid to diet in the treatment of these cases than is commonly done.

In the practice of *midwifery* we follow nature more than the English in general do, *artificial* means of delivery not being employed before we are fully convinced of the inability of nature to do the work. The forceps used are Smellie's, but with this

modification, made by the elder Saxtorph, that there is a joint which can be fastened and loosened at the handle of both the fenestræ, by which, when they are loosened, a greater force can be employed in order to adjust the blades of the forceps round the head of the child. The rules for applying the forceps are those usually followed in Germany. The patient is placed upon the delivery-chair, her thighs are drawn up and the pelvis is put near the edge of the chair, the feet and knees being supported by assistants. When applied, the forceps are, during the extraction of the child, to be moved from side to side, not up and down, as otherwise they might easily glide off. *Turning* is used whenever the child has any unnatural position, or when the funiculus is prolapsed, or in case of twins. The fittest time for turning is considered to be when the membranes are still unruptured, and the os uteri so dilated that a clenched hand can be brought through it, consequently, when the second period of the parturition passes into the third. The hand is then introduced between the membranes and the womb ; the membranes are ruptured from the side by a couple of fingers, by which, the hand filling up the orifice of the uterus, the waters are prevented from discharging themselves, and in this manner facilitate the operation. Should the hand of the operator be very large and much liquor amnii be present, the membranes are to be ruptured at the os uteri. When, by turning, the child has been extracted as far as the hips, and the points of the toes turn upwards, Saxtorph and all Danish practitioners turn the child in the following manner : a napkin is passed

round the body of the child over the hips; both hands are then applied on these, so that the thumb is placed on the fore part of the body, and the other fingers on the back part; the child is then turned round, so that it becomes placed with the belly pointing to the floor, when it is extracted, by the hands moving it upwards and downwards, as far as the shoulders; the arms are now loosened, the lower one first, the feet being seized with the one hand of the operator, (the heels lying in the palm of the hand,) and the child lifted upwards, and first the elbow and then the rest of the arm of the child are seized and carried out in a half circle over the face and chest of the child. Should the arms be lying across on the neck, which may be ascertained by a large fold of the skin between the shoulders, the hips are seized in the above mentioned manner, and the child slowly thrust a little up into the womb, by which operation the loosening of the arms is very much facilitated. At the moment when the head is to be extracted, it is usual again to lift up the body of the child, to bring the right hand into the womb beneath the face of the child, then to apply the fingers over it, and while the left hand is drawing, to carry the whole head, and in particular the jaw, down, by which the head of the child is easily freed. In cases of twins, it is known that the most celebrated practitioners, Siebold, Froriep, Bush, Conquest, Osiander, Kilian, &c., advise not to turn the other child when the first is born; but Saxtorph, as well as Fenger, maintain, on the contrary, that as soon as one child is born, the other is to be extracted by turning as

soon as possible. They assert that the second child commonly dies when this is omitted. *Sharp instruments* are very seldom used with us, and only when we are forced to it by necessity.

Before bringing this essay on the *Medical Topography of Copenhagen* to a conclusion, it should be stated that every year a table is published of the number of marriages, births, and deaths in Denmark during the past year. This table is the result of the combined reports made by the clergy in the towns and different country districts. No burial can now take place without a certificate either from the physician who has treated the last illness of the deceased, or who examines the dead body in order to certify that real death has taken place. On this certificate are written the name and dwelling-place of the deceased, and the disease of which he died, and it is then to be delivered to the town or parish physician, by whom it is again communicated to the Royal College of Health. From these returns are drawn up the annual bills of mortality published in Copenhagen. From the table of marriages, births, and deaths in Denmark, for the year 1835, it appears that the number of marriages in all Denmark for the same year, was ten thousand and eighty-eight, which is four hundred and seventy less than in 1834, but one thousand and sixty more than in the foregoing thirty-three years. If the population of Denmark, at the beginning of 1835, is reckoned to amount to one million two hundred and thirty-four thousand, the number of marriages in 1835, is as one to one hundred and twenty-two of the whole popu-

lation ; in the foregoing thirty-three years it was as one to one hundred and nineteen. It appears likewise from the table that the earlier marriages, of persons of twenty-five years old or younger, are more frequent in the country than in the towns, and more so amongst females than males. Marriages of persons above fifty years old are likewise more common in the country than in the towns. Everywhere the greatest number of marriages are entered into in the months of May and November. The number of *births* in 1835, in all Denmark, was forty-one thousand and fifty-two, which is one thousand three hundred and ninety-three less than in 1834, but considerably more than in the foregoing years ; it is, upon the average, as one to thirty of the whole population. In Copenhagen there are six more deaths than births, but taking the whole country, there are more births than deaths. The proportion of girls to boys born, was, in 1835, as one thousand to one thousand and fifty-three, but more boys were born dead, in the proportion of one thousand five hundred and thirty-one to one thousand. The proportion of illegitimate to legitimate births was, in 1835, as one to eight ; from 1831 to 1835, one hundred and ninety-seven thousand three hundred children were born ; of these eighteen thousand six hundred and eighty-eight, or nine per cent., were illegitimate ; so that the number of illegitimate births is very large in Denmark, and proportionally larger than in any other country. The proportion of still-born to living-born was, in 1835, as one to twenty-two thousand and seventy. Five hundred and seventy-nine women were de-

livered of twins, and thirteen of three children at once. The number of deaths in 1835, amounts, in all Denmark, to thirty thousand one hundred and seventy, which is five hundred and fifty-two less than in 1834, thirty-five more than in 1833, but considerably less than in the preceding four years. The proportion of deaths to the whole population, was as one to forty-one. There were one hundred and ninety-two deaths by suicide.

ARTICLE III.

ON THE

MEDICAL TOPOGRAPHY, STATISTICS, CLIMATOLOGY,

AND

NATURAL HISTORY

OF

SWANSEA, GLAMORGANSHIRE.

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THE medico-topographical accounts which have already appeared in the *Transactions* of the Provincial Medical Association, and the importance that is justly due to such documents, must be my apology for offering the following imperfect one of Swansea, and I could only wish it had been drawn up by older and more experienced hands than my own; nevertheless, it may perhaps serve to fill up a blank that exists, as hitherto no medico-topographical account of *any* of the towns in either North or South Wales has appeared.

To the meteorological tables I attach some importance, as none are published, so far as I am

aware, in any town in South Wales; and those which I now beg to offer to the Association, have been drawn up with every attention to accuracy and care that I was able to bestow upon them. For the commercial statistical tables I am indebted to my friends, Starling Benson and E. Budd, Esqrs.; for the abstract of cases in the Infirmary, to my late partner, G. G. Bird, Esq., senior surgeon to that institution; and for the list of plants, to L. W. Dillwyn, Esq., a gentleman who has indeed done very much towards improving our knowledge of the natural history of this particular district, rich alike in nearly every branch, and especially in botany. Many rare and unique plants are found immediately round Swansea, and one, the *Draba aizoides*, is met with only in this locality. The publication of local floras is, I am happy to say, now becoming very general all over England; their utility and advantage cannot be doubted, and it is by the multiplication of such works alone, that we can eventually hope to have a perfect one of the United Kingdom, a *desideratum* that has long been wished for by the student in botany: I trust ere long a flora may appear of this particular neighbourhood, especially as we can now boast of a *Royal Institution*, with an enlightened man like Mr. Dillwyn for its President.

Description of Swansea.—The town of Swansea lies at the confluence of the river Tawe with the Bristol Channel, and nearly in the centre of a most extensive bay, compared in common with others to that of Naples; the two extreme points being the Mumbles and the Sker Point.

It is erected on a semicircular rising bank, near the mouth of the river, and on an angle between two hills, which defend it from the north-west to the north-east; it forms an irregular oblong of about a mile and a half in length, and is intersected in the greater part of its extent towards the sea by the windings of the Noct. It is eight miles from Neath, thirty-two west-north-west of Cowbridge, forty-four from Cardiff, and two hundred and six from London; from Langham nine, Llanelly twelve, Carmarthen twenty-eight, and from Merthyr thirty-two. The river Tawe, which falls into the Bristol Channel close to the town, is navigable only for about two miles and three-quarters from its mouth, and then only at the time of high water,—at least, for vessels of any burthen. It is a river much affected by freshes in wet weather; frequently overflowing the banks above the town, and flooding the adjacent lands.

Swansea is an ancient borough town, the corporation consisting of a mayor, six aldermen, and eighteen common councilmen, to whom is entrusted the management of a very considerable and certainly very improvable property. The living is a discharged vicarage, in the archdeaconry of Carmarthen and diocese of St. David's. The increase in population has been very considerable within these last few years, owing principally to the large increase in the number and extent of its manufactories, and the improved state of its trade and commerce. The improvement of the harbour was a subject of anxious consideration many years ago. The first meeting for this purpose was held in

1771, but nothing effectual was done until an act of parliament was obtained in 1791, entitled "An Act for repairing, enlarging, and preserving the Harbour of Swansea." A great improvement was then effected, under the direction and according to the plans of Capt. Huddart; and very considerable further improvement is now contemplated and called for from the great inconvenience that laden vessels experience in lying dry in the absence of the tide, which they are compelled to do for want of a floating dock. This evil is at present attracting no inconsiderable share of the public attention; and it is to be hoped that ere the lapse of many years, sufficient and ample accommodation will be provided for the increasing trade of this most important port. The accommodation for coasters in this harbour may be considered as most ample; but this cannot be said of the layerage for ships of greater burthen and carrying heavy cargoes. There is an admirable roadstead at the Mumbles capable of protecting a very large fleet of ships.

Swansea has long maintained a prominent position as a maritime port, and during the last twenty years has been gradually increasing in importance; it furnishes constant intercourse with London, Liverpool, Bristol, Gloucester, Devon, Cornwall, and Ireland; it carries on also an extensive trade with North and South America, the West India islands, especially Cuba; with the Baltic, France, Spain, Portugal, and the Mediterranean. Its most important trade is the exportation of coal. The South Wales basin produces a greater variety of coals than any other coal field.

In it are found coals of a very bituminous quality, adapted for household purposes, and chiefly shipped at Newport and Cardiff. It monopolises the production of the steam-packet coals, which are found so well adapted for such purposes, that they are now used in the Government steamers, almost to the exclusion of all other descriptions; this coal is shipped at Swansea, Neath, and Llanelly. Culm is almost peculiar to this basin, as is also anthracite or stone coal, which has hitherto been used chiefly for malting, dying, and chemical purposes, but which has recently been successfully applied to the smelting of iron ore; and as it is found in a district which teems with the latter mineral, this circumstance is likely to be productive of important consequences to that portion of the grand basin called the Anthracite Basin, which occupies its northern edge, commencing at St. Bride's, in Pembrokeshire, and terminating near the Hirwain iron works, being upwards of seventy miles in length.

The internal consumption of coal in South Wales is enormous, and infinitely exceeds the quantity sent away. The iron works of Merthyr Tydfil and Monmouthshire, the copper works of Swansea, Neath, and Llanelly, the numerous manufactories of tin plates, the iron foundries, all consume enormously of coal. An approximate estimate of the quantity consumed in these establishments it would be impossible to make with any exactitude, but we are certainly within the mark in taking the consumption of the iron works, in 1837, at two millions of tons; of the various copper works, at about three hundred thousand tons; and of the

other manufactories, at about two hundred thousand tons; which, added to the quantity shipped, will make the production of coals in the South Wales district in the past year little short of four millions of tons.

The basin commences at Pontypool on the east, and ends at St. Bride's Bay on the west, being upwards of one hundred miles in length, and twenty miles broad at the widest part, in the bituminous district, narrowing greatly in the anthracite district, where Carmarthen Bay intercepts a considerable portion of the basin. According to the late Mr. Martin (whose opinion has been confirmed by the eminent geologist, Mr. Conybeare, in a letter addressed to the Chairman of the Parliamentary Committee on the coal trade in 1830), the thickness of coal in this basin is ninety-five feet, consisting of twenty-three workable veins or seams, varying in thickness from one foot six inches to nine feet. The workings have hitherto been confined to the upper range of seams, and have been principally carried on by adit or level; much coal is still workable by these means, and the lower range of seams is wholly unworked. The average depth of the pits may be taken at from thirty to thirty-five fathoms, with very few exceptions: the only one of importance is the St. David's pit, near Llangennech, which has been sunk one hundred and eleven fathoms.

From the rich and extensive mineral district by which Swansea is surrounded, extensive manufactories have sprung up in all directions, consisting principally of works for the smelting of copper

ore; they were established in the neighbourhood of Swansea upwards of a century ago. The first erected was close to the town; it was, however, afterwards removed to about two miles from Swansea, to Llandover, and about eighty years ago the white rock works were erected; since that time six others have been built, tending very materially to increase the trade of the town. It is calculated that a population of from eight to ten thousand souls is entirely supported by the coal and copper trade of this port.

The following tables contain an account of the quantity of copper ore imported into Swansea, and the quantity of copper manufactured exported.

A comparative account of copper ore imported into the United Kingdom for the last five years.

	1833. Tons.		1834. Tons.		1835. Tons.		1836. Tons.		1837. Tons.
Liverpool.....	3235	...	2786	...	6696	...	7479	...	5982
Swansea	2562	...	4276	...	7008	...	9074	...	12665
Llanelly	134	...	220	...	236	...	693	...	299
London and Bristol	1	...	19	...	5	...	1173	...	604
Total	5932	...	7301	...	13945	...	18419	...	19496

A large portion of the ore received at Liverpool, and the whole of that received at London and Bristol, is transhipped in smaller vessels to Swansea, and there smelted.

Independently of these works there are some extensive foundries, tin works, spelter works, chemical works, and potteries, where formerly china of the finest description was manufactured, and there is a manufactory for the fabrication of Welsh flannels,

Some few years ago, Swansea also participated in a considerable trade in ship building, but at present this branch of her trade is very much diminished, in consequence of the constant demand on the part of the workmen for increased wages.

The bulk of the inhabitants of the town are engaged in various branches of trade; the private gentlemen, for the most part, residing round the Bay, which, from the great beauty it possesses, offers no slight inducement to those who may be enabled to free themselves from the trammels of a commercial life to retire thither. The upper or northern part of the town is principally inhabited by workmen, either engaged in the potteries or other manufactures in the town, but the bulk of them may perhaps be said more exclusively to be employed in the extensive copper works erected near it; contiguous to Greenhill turnpike exists a small colony, if I may be allowed the use of the term, of Irish, also employed in the works. This part, and the streets branching out of High-street, are probably the most densely populated; and from the houses being small, the families poor, and many living in the same tenement, fevers and contagious diseases frequently make their appearance; but from the mildness of the atmosphere of the neighbourhood, the sloping ground surrounding, and the dryness of the soil, epidemic diseases here may be said to be of an innocuous character, as compared with many other localities, nor are the severer kinds of inflammatory complaints frequent. There have, however, during the last twelve months, appeared among the indigent inhabitants several

cases of typhus of a fatal character; and it is questionable whether this may not have in some measure originated from the imperfect state of the sewerage, the impure condition of the streets, and the comparatively small supply of fresh water, all calling sadly for improvement; as it is well known nothing so materially tends to the health and well-being of a thickly populated town, as the greatest attention to these all-important points. The measles during the spring that has passed were general; but the attendant type and symptoms remarkably favourable, as were also those of the influenza during the past autumn. Cases of small-pox are also of frequent occurrence here in particular seasons of the year; although generally perhaps possessing a mild character. The benefit and value of vaccination has long been felt and appreciated in the neighbourhood and town of Swansea. Gratuitous vaccination is practised to a very considerable extent, principally by the druggists of the town. Small-pox inoculation is never used, so far as I am aware, by any medical practitioner, either here or in the neighbourhood. The number of cases of small-pox on the books of the infirmary during the last three years amounts to no more than sixteen; of these, six occurred in 1836-7, and ten in 1837–8. Three were fatal, and they belonged to the last-named year. These facts strongly point out the combined advantages which must accrue from a strenuous combination on the part of the public and the medical profession to avail themselves of the means which vaccination offers for checking one of the greatest scourges to which the human race is

liable. With regard to the effects, whether injurious or otherwise, of the smoke from the copper works, I may be allowed to say a few words; and for much of the information I am enabled to give, I am indebted to my late friend and partner, G. G. Bird, Esq., having myself only attended the men at the works for two years. From my own experience, and from that of Mr. Bird during twelve years, I should certainly be disposed to say, that the men employed in the copper works, and living almost constantly in the smoke, are not more subject to disease than in other localities, where there is a dense and crowded population, and where the individuals are constantly subject to violent alternations of temperature. Lest an erroneous impression might be given by my making use of the term dense and crowded population, it may perhaps be well, in a few words, to describe the locality principally occupied by the workmen employed in the copper manufactories near Swansea. Moriston, where the bulk of them reside, is situated in a valley, and composed for the most part of rows of small tenements of one story high, and from ten to twenty in number, and inhabited by separate families, with a space before and behind; the neighbourhood, although not close and confined as Manchester or the back streets of London and Birmingham is still thickly populated. The river Tawe runs along the centre of the valley, dividing Moriston from a somewhat similar village on the other side, also inhabited by copper-men, and both built on the acclivity of a hill. Disagreeable as its smoke undoubtedly is to the feelings of all imme-

diately within its range, and probably depressing in its effects to some constitutions, I should say that it acts directly as an agent in inducing disease to a much less amount than would, from *a priori* reasoning, be supposed. I know not whether a better illustration of this fact can be given, than the known longevity of those living immediately in the smoke of the copper works. There are at present two women upwards of ninety, who were not in their early years brought up or inured to its effects, but who are now living in the midst of it, and enjoying excellent health.

Epidemics have rarely proved fatal, of which a striking example may be adduced during the time of the cholera. Typhus fever may be said also to be rare, perhaps in some degree to be accounted for from the men getting high wages and being regularly paid. The influenza has prevailed more than once, but never to any fatal extent. At one time it prevailed to so great an extent as to cause great inconvenience in keeping the works going; and of three hundred cases at this period, only two or three proved fatal. Vaccination is generally practised amongst the families of the workmen, and they hold it in high estimation. Instances of small-pox are not unfrequent here, following vaccination, but very rarely prove fatal. Of those diseases most frequently met with, the following perhaps may deserve to be mentioned. Gout is not uncommon, and oftentimes very severe; also phthisis pulmonalis, but not more frequent than in other manufacturing districts, where the atmosphere is vitiated not only by the smoke of the manufactory, but also by the

crowded state of the population. Diseases of the heart—hypertrophy, for instance, is a disease frequently to be met with; cases of active inflammatory attacks in the lungs and other viscera, and also of rheumatic inflammation, are more rare here than elsewhere. In cases of midwifery the women are ordinarily attended by the midwives of the village, and those to which the surgeon belonging to the works is generally called to attend are protracted labours. Rubeola has perhaps this year prevailed more generally than it usually seems to have done, few fatal cases, however, occurring; it commenced about the 1st of January, and subsided about the latter end of April. It has been said that copper smoke acts directly as a means in dissipating miasma, and preventing ague, &c.; a satisfactory solution of this hypothesis I have been unable to obtain; instances of ague, however, are certainly very rare at the works, although an extensive marsh is still in existence contiguous to them. Infantile diseases, such as croup, measles, &c., are not uncommon, and often prove fatal, arising no doubt in a great measure from the proverbial carelessness of the parents in sending for medical assistance, and the neglect in administering the remedies when procured. On the whole, I think, it is fair to conclude that, however disagreeable the smoke may be, however injurious it may prove to the vegetable world, or to the brute creation, yet on man it appears certainly not to produce any baneful effects, nor are those who live more immediately under its influence, more subject to disease than in other manufacturing districts.

The waterworks.—Amongst the recent improvements introduced into the town, and one that will eventually tend perhaps more than any other to ameliorate epidemic disorders, is the introduction of pure and wholesome water for the use of the inhabitants, supplied to them from a spacious reservoir situated about two miles from the town, and conveyed into it by iron pipes. The impure and noxious quality of the water with which the inhabitants of Swansea were originally supplied had long been a subject of loud and general complaint; visitors and strangers, accustomed to the ample supply of pure and wholesome water, which science and the progress of commercial speculation have introduced into most of the large towns of Great Britain, can with difficulty reconcile themselves to the necessity of purchasing it at an extravagant rate, and by the inconvenient manner, and the precarious and scanty supply dispensed from a few water carts perambulating the streets; neither do they feel that they can with safety to their health submit to the alternatives of using the nauseous and insalubrious fluid obtained from many of the wells of the town, or the equally impure rain water obtained from tanks, so constructed as to receive, not only the pure element as it falls from the heavens, but also the washings of the roofs of the houses, together with the accompanying mass of filth, copper smoke, and other impurities with which the slates must of necessity be encrusted.

Several springs of a medicinal nature are met with near the town, especially one, containing a large proportion of sulphur, at St. Helen's, about

half a mile from the town; none of these have, however, as yet been applied to any practical purposes, nor, as far as I am aware, have any of them been subjected to accurate analysis.

The Infirmary at Swansea, though of no great size, may vie with many in the benefits it has conferred, with its limited means, on the suffering poor.

The following is an abstract of the cases of in-door and out-door patients from June, 1836, to May, 1837, inclusive; and from June, 1837, to April, 1838:—

IN-DOOR PATIENTS.

	Number.	
Locality.	In 1837.	In 1838.
From the town of Swansea	23	8
Glamorganshire	43	40
Breconshire	5	1
Pembrokeshire	2	0
Carmarthenshire	20	11
Various parts of England	11	11
Ireland	2	0
Scotland	1	0
Foreigners	3	2
	110	73

	Discharged for misconduct.	
	In 1837.	In 1838.
For absence and inebriety	4	0
For brawling in the house	2	0

	Deaths.	
	In 1837.	In 1838.
Ascites	2	0
Disease of the heart	1	0
Burn, very old woman	1	0
Compound fracture, followed by locked jaw	1	0
Hydrophobia	1	0
Injury to the spine	0	1
Disease of the spine	0	1
	6	2

Casualties.

	In 1837.	In 1838.
Asphyxia	2	0
Burn	0	1
Contusio brachii	1	1
——— pectoris	0	1
——— of the hip	0	1
——— genu	0	1
Fracture, tibia and fibula	0	1
——— compound	1	0
——— femur and humerus	1	0
——— femur	0	1
Injury to the arm	0	1
——— back	0	1
——— knee	0	1
——— spine	0	1
Wound on the head	0	1
	6	11

Diseases.

	In 1837.	In 1838.
Abscess, armpit	1	0
——— chest	1	0
——— back	1	0
——— groin	1	0
——— thigh	1	1
——— foot	1	1
Abscess	0	1
Amenorrhœa	1	0
Amaurosis	0	1
Anasarca	1	0
Aneurism	1	0
Apoplexy	0	1
Ascites	3	0
Asphyxia	2	0
Bronchocele	1	0
Bronchitis	2	1
Bursæ	0	1
Cataract	2	1
Cachexia	0	1
Calculus	0	1
Cancer of breast	0	1
Contusions	3	3
Diseased spine	0	1
——— testicle	0	1
——— foot	0	1

Diseases.

	In 1837.	In 1838.
Diseased elbow	0	1
——— arm	0	1
Dislocation, arm	0	1
Dyspepsia	6	1
Epilepsia	1	3
Erysipelas, face	1	0
Eruption	1	0
Fever	1	1
Fract. tibia and fibula	1	0
—— compound	1	0
—— femur & humerus	1	0
—— femur	0	1
Fungus hæmatodes	1	0
Gastritis, chronic	2	0
Hæmoptysis	1	1
Hæmorrhois	1	0
Hydrophobia	1	0
Hydrops corneæ	1	0
Hydrocele	0	1
Icterus	0	2
Impetigo	1	1
Influenza	1	0
Inflamed ankle	1	0
——— bursæ	2	0
Iritis	1	0

Diseases.	In 1837.	In 1838.
Injury, arm	0	1
—— back	0	1
—— knee	0	1
—— spine	0	1
Morbus genu	2	0
—— coxendicis	2	1
—— cordis	0	1
Necrosis femoris	1	0
—— tibiæ	1	0
Neuralgia	2	0
Opaque cornea	1	0
Ophthalmia	1	1
Paralysis	0	1
Periostitis	2	1
Phlegmasia dolens	1	0
Phthisis	1	2
Pneumonia	1	0

Diseases.	In 1837.	In 1838.
Purpura	0	1
Prolapsus ani	1	0
Rheumatismus	10	10
Scrophula	0	1
Struma	8	1
Syphilitic sore throat	0	1
Scurvy	0	2
Ulcer of the arm	1	0
—— leg	13	6
—— face	1	0
—— palate	1	0
Ulcer	1	0
Urinary calculus	2	0
Ustio	2	0
Variola	2	0
Wounds	2	6
—— head	0	1

Important operations performed in the last two years.

In 1837.

Amputation of the thigh for necrosis of the femur.—*cured.*

Tying the femoral artery, both legs, for popliteal aneurisms.—*cured.*

Amputation below the knee.—*cured.*

Amputation of the thigh for necrosis.—*cured.*

In 1838.

Lithotomy.—*cured.*

Steatomatous tumour removed from the groin.—*cured.*

Cancer of the lip.—*cured.*

Removal of a scirrhous breast.—*cured.*

Lithotomy.—*cured.*

Amputation of the leg, under treatment and doing well.

OUT-DOOR PATIENTS.

Locality.	*Number.* In 1837.	In 1838.
From Swansea	940	937
Its vicinity		94
Bristol		1
Breconshire	23	10
Carmarthenshire	18	10
England	9	3
Monmouthshire	0	6
Pembrokeshire	0	4
Cardiganshire	0	2
Jersey	0	1
Glamorganshire, eastern parts	50	0
	1040	1062
Various other places	24	

	Deaths. In 1837.	In 1838.
Anasarca	2	2
Apoplexia	1	1
Bronchitis	3	3
Cynanche	1	0
Cynanche maligna	2	0
Diabetes	0	1
Diarrhœa	1	0
Febris	5	4
——— typhus	0	4
Hepatitis	0	1
Influenza	3	0
Icterus	0	1
Phrenitis	1	1
Pneumonia	2	6
Phthisis	9	8
Peritonitis	0	1
Rheumatismus	1	0
Rubeola	0	4
Scarlatina	2	0
Variola	1	0
	34	37

	Diseases. In 1837.	In 1838.
Abortus	3	0
Abscessus	12	13
Amaurosis	1	0
Amenorrhœa	19	15
Anasarca	15	6
Aneurisma	1	0
Apoplexia	1	2
Asthma	1	3
Ascites	2	2
Angina pectoris	0	1
Ague	0	4
Blenorrhœa	6	3
Bronchitis	48	46
Bursa inflamed	0	2
Burns	0	4
Bite of dogs	0	3
Catarrhus	3	4
Chorea	5	2

	Diseases. In 1837.	In 1838.
Chlorosis	3	3
Contusio	21	18
Colica pictonum	3	3
Constipatio	8	3
Congestio cerebri	1	0
Cynanche	17	5
Croup	1	0
Cystitis	1	0
Concussio	0	1
Cessation of the menses	0	3
Chancres	0	2
Cephalalgia	0	2
Cachexia	0	2
Debilitas	5	6
Diarrhœa	19	21
Diseased prostate	1	0
Dyspepsia	47	72
Dysenteria	3	0

Diseases.	In 1837.	In 1838.
Dysuria	1	4
Dysmenorrhœa	0	4
Diseased spine	0	1
Dislocation of finger	0	1
Enteritis	2	2
Erysipelas	6	3
Erysipelas in legs	3	3
Enlarged prostate	0	1
Epistaxis	0	1
Febris	58	79
—— typhus	0	11
—— quotidian	0	4
—— nervosa	0	2
Fractures	4	6
Frostbitten	0	1
Gastritis	21	16
Gastrodynia	0	1
Gonorrhœa	0	9
Gunshot wound	0	1
Hæmoptysis	3	0
Hæmorrhois	4	0
Hæmatemesis	1	1
Herpes senilis	1	0
Hernia	2	0
Hysteria	1	0
Hepatitis	0	6
Hydrothorax	0	3
Hemiplegia	0	2
Icterus	2	10
Inflamed glands	6	0
—— eyes	0	2
—— ankle	0	3
—— knee	0	2
—— face	0	1
—— leg	0	1
—— testis	0	1
—— hand	0	1
Inflammatio	0	2
Impetigo	1	3
Inflamed bursæ	1	0
Influenza	1	0
Injury to the hand	0	1
—— head	0	1
Injury to the eye	0	1
Lichen	1	0
Lepra syphilitica	8	2
Lumbago	3	6
Leucorrhœa	0	3
Marasmus	1	0
Menorrhagia	3	7
Morbus coxendicis	3	3
—— genu	4	0
—— cordis	0	1
Nephritis	3	0
Neuralgia	0	1
Noli me tangere	0	2
Ophthalmia	11	13
Ditto strumous	0	1
Paralysis	2	1
Pericarditis	1	1
Pertussis	4	2
Phthisis	24	22
—— incipiens	8	4
Phrenitis	1	1
Phlegmasia dolens	1	3
Pleuritis	18	10
Pneumonia	9	14
Prurigo	4	5
Prolapsus uteri	1	0
Psora	21	40
Purpura	0	2
Porrigo senilis	0	2
Psoriasis	0	1
Peritonitis	0	3
Periostitis	0	3
Punctured eye	0	1
Rheumatism	38	36
Roseola	0	1
Rubeola	0	85
Scarlatina	19	0
Sciatica	1	0
Struma	8	92
Scabies	0	4
Scabies virulenta	0	1
Syphilis	0	3
—— secondary	0	2

Diseases.	In 1837.	In 1838.
Scrofula	0	3
Scirrhous pylorus	0	1
——— lip	0	1
Scirrhus mammæ	0	1
Stricture	0	2
Tabes mesenterica	1	0
Tenia	3	2
Ulcera	33	20
Urinary calculi	1	0
Urticaria	2	4
Ustio	4	2
Variola	6	14
Vulnus	8	5
Vermes	0	11
Poison	0	1

Swansea boasts of a commodious and handsome market, inferior perhaps to none in the kingdom either in extent or convenience The supply of provisions does not however quite correspond; fish, although abundant in the adjacent bays, is inadequately supplied, to meet the demand; poultry and game are abundant; the meat, generally exposed for sale, especially the mutton, is good; the beef, from the poor qualities of the pasturage around, is lean or ill fed; the supply of fruit is invariably scanty, and the bulk of that exposed for sale is procured from Bristol, Gloucester, or Devonshire; the vegetables are also inferior to those in many smaller market towns in England. The climate of Swansea is generally mild, and a long continuance of cold weather of very rare occurrence. It is however certainly humid, owing perhaps to the district being exposed to vapours caused by western or south-western winds from the Atlantic, and attracted by the hills; these winds prevailing to a very considerable extent. This humidity is a source of much perplexity to the farmer during the hay and corn harvests, and also causes

considerable damage to various agricultural crops, by the abundant growth of natural grasses which in consequence spring up, and which on the deep gravelly soils it is found almost impossible to eradicate from the arable lands. The atmosphere of the mountains, however, is cold and tempestuous; the winters being severe and frequently of long duration; fogs, which hang upon their summits, are invariably deemed a certain prognostic of rain.

The following tables are intended to give the maximum, minimum, and mean of the thermometer for the year 1837, and to June, 1838, in comparison with those of London for the same period :—

Maximum temperature for each month in the year 1837, *and to June*, 1838.

	Year.	Jan.	Feb.	Mar.	April	May.	June	July	Aug.	Sep.	Oct	Nov.	Dec.
London	1837.	50.7	54.0	49.2	59.2	66.3	75.8	79.6	78.8	69.7	67.3	56.4	55.3
Swansea	1837.	61.	63.	69.	65.	64.	75.	81.	79.	71.	65.	56.	56.
London	1838.	48.8	48.7	57.0	64.2	73.8	79.7						
Swansea	1838.	52.	48.	62.	68.	69.	75.						

Minimum temperature for each month in the year 1837, *and to June*, 1838.

	Year.	Jan.	Feb.	Mar.	Apr.	May.	June	July.	Aug.	Sept.	Oct.	Nov.	Dec.
London	1837.	24.0	31.9	26.7	28.0	35.5	43.2	47.5	48.5	44.4	38.3	28.0	31.7
Swansea	1837.	24.	32.	27.	30.	39.	47.	54.	46.	46.	41.	33.	31.
London	1838.	11.4	24.8	35.0	29.8	36.3	44.2						
Swansea	1838.	17.	25.	30.	31.	38.	42.						

Mean maximum temperature for each month in the year 1837, *and to June* 1838.

	Year.	Jan.	Feb.	Mar.	Apr.	May.	June	July.	Aug	Sept.	Oct.	Nov.	Dec.
London	1837.	42.7	46.5	42.6	47.0	57.6	68.5	71.7	70.0	63.2	58.8	49.0	46.6
Swansea	1837.	48.	54.	54.	56.	48.	71.	71.	68.	63.	60.	52.	49.
London	1838.	34.4	38.4	49.2	50.9	61.3	68.6						
Swansea	1838.	38.4	39.9	51.2	53.4	62.9	67.1						

Mean minimum temperature for each month in the year 1837, *and to June*, 1838.

	Year.	Jan.	Feb.	Mar.	Apr.	May.	June	July.	Aug.	Sept.	Oct.	Nov.	Dec.
London	1837.	35.3	38.0	33.9	37.3	44.4	53.8	56.7	56.6	51.7	46.1	37.2	39.8
Swansea	1837.												
London	1838.	27.1	31.2	38.1	39.2	45.8	53.6						
Swansea	1838.	32.2	32.1	38.1	41.7	47.9	53.8						

Mean temperature of each month in the year 1837, *and to June*, 1838.

	Year.	Jan.	Feb.	Mar.	Apr.	May.	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
London	1837.	39.0	42.2	38.2	42.1	51.0	61.1	64.2	63.3	57.4	52.4	43.1	48.2
Swansea	1837.	42.	48.	46.	49.	54.	62.	64.	65.	59.	61.	48.	46.
London	1838.	37.1	34.8	43.6	45.2	58.5	64.6						
Swansea	1838.	37.1	348	43.6	45.3	53.5	61.1						

Mean temperature of the seasons for the year 1837, *and to June*, 1838.

	Year.	Spring.*	Summer.	Autumn.	Winter.
London	1837.	43.7	62.8	59.2	43.1
Swansea	1837.	49.2	63.2	56.	45.1
London	1838.	49.1			
Swansea	1838.	49.1			

* Spring including the months of March, April, and May; summer, June, July, and August, and so on.

Mean temperature for the year 1837.

London, 1837, ... $51\frac{1}{2}$
Swansea, 1837, ... 51

The south-west winds have generally been considered the most prevalent here. Occasionally during the last two years we have been visited with some very heavy storms, generally occurring in the month of November. That in 1836, memorable for having caused so much devastation throughout England, also raged here with great violence; and another very violent one at the latter end of October, 1837. Snow is not of frequent occurrence in Swansea, and remains but for a very short time on the ground. The winter of last year proved more severe than has been remembered for a great length of time; the snow, then, however, was of comparatively minor importance, scarcely being found a foot in depth, and remaining on the ground only for a few days, although the surrounding hills were covered for as many weeks. The devastation, too, caused in England to the trees and evergreens was far greater than in Swansea and its neighbourhood, some few suffering, but many escaping nearly altogether.

The following tables, for the years 1836 and 1837, will perhaps convey a more correct idea of the climate and alternations in temperature, &c., than any other description that I could give. The mean temperature of three years appears to be very nearly the same as that of London and Plymouth; in fact, on comparing the following table with Mr. Snow Harris's, at Plymouth, it will be seen that the climate of Swansea approximates very closely to that of Plymouth.

Summary, No. 1, *of a Meteorological Journal, for the year* 1836, *kept at Swansea.*

		January.	February.	March.	April.	May.	June.	July.	August.	September	October.	November.	December.	Total for the year.
At 9 A.M.	Maximum of thermometer	62	61	59	60	70	72	78	72	65	62	63	60	78
	Minimum of thermometer	25	48	28	32	38	50	51	49	44	32	31	29	25
	Mean maximum of ditto	53	58	48	51	60	63	66	66	57	54	51	49	56½
	Mean minimum of ditto	46	50	35	41	46	54	56	56	51	46	41	41	47
	Mean of the whole	49	54	41	46	53	59	61	61	54	50	46	46	52
At 5 P.M.	Maximum of thermometer	...	...	...	...	...	..	...	...	64	68	61	61	68
	Minimum of thermometer	...	...	...	...	...	...	...	...	47	34	33	32	32
	Mean maximum of ditto	...	...	...	...	...	...	...	...	51	55	51	49	51
	Mean minimum of ditto	...	...	. .	...	...	...	...	...	47	50	45	43	46
	Mean of the whole	...	...	...	...	...	..	...	..	49	52	48	46	48
Greatest range of the thermometer in the 24 hours		25	11	20	17	18	21	21	18	17	23	28	17	28
Least range of ditto in the 24 hours		1	4	3	5	7	2	4	4	...	1	...	1	0
Range for the whole month		37	13	31	28	32	22	27	23	21	36	32	31	53
Average daily range		7	8	13	10	14	9	10	10	5	6½	8	7	9
Mean for the whole month		49	54	41	46	53	59	61	61	51½	51	47	45½	51½
9 A.M.	Maximum height of barometer	30.50	30.93	30.20	30.30	30.51	30.20	30.50	30.31	30.24	30.40	29.95	30.30	30.93
	Minimum height of ditto	29.20	28.55	28.66	28.96	29.71	29.44	29.36	29.21	29.12	28.97	28.71	28.98	28.55
	Mean height	29.84	29.73	29.38	29.77	30.13	29.82	29.91	29.95	29.83	29.68	29.55	29.69	29.77
5 P.M.	Maximum height of barometer	...	...	...	...	...	...	...	...	30.19	30.39	30.00	30.28	30.39
	Minimum height of ditto	...	...	...	...	...	...	...	...	29.23	28.84	29.14	28.84	28.84
	Mean height	...	...	...	...	. .	...	...	...	29.81	29.68	29.52	29.67	29.67
Greatest range in the 24 hours		0.45	0.77	0.84	0.50	0.23	0.37	0.55	0.78	0.52	0.87	0.64	0.62	0.87
Least range in the 24 hours		0.00	0.00	0.00	0.00	0.00	0·00	0.03	0.00	0.01	0.00	0.04	0.00	0 00
Range for the whole month		1.30	2.38	1.54	1.34	0.80	0.76	1.14	1.10	1.12	1.43	1.28	1.46	1.30
Average daily range		0.04	0.08	0.05	0.04	0.03	0.03	0.04	0.04	0.04	0.05	0.04	0.05	0.04
Mean for the whole month		29.84	29.73	29.38	29.77	30.13	29.82	29.91	29.95	29.82	29.68	29.53	29.68	29.77
9 A.M.	Maximum dew-point	...	...	...	...	...	...	. .	64	60	57	53	53	64
	Minimum dew-point	...	...	...	...	...	...	...	46	40	22	33	28	22
	Mean dew-point	...	...	...	..	...	...	. .	55	51	47	43	43	48
5 P.M.	Maximum dew-point	...	...	...	...	...	...	...	...	59	57	52	53	59
	Minimum dew-point	...	...	...	...	...	...	...	...	40	25	31	23	23
	Mean dew-point	...	...	...	...	...	...	. .	...	49	47	44	41	45
Mean dew-point for the whole month		...	...	...	...	..	...	...	...	50	47	43	42	46½
Mean dew-point in grains, per cubic foot														
Rain fallen for the month		1.61	2.15	6.43	3.70	0.04	4.74	1.07	1.40	3.33	4.58	6.70	3.11	38.86
Greatest quantity of rain in the 24 hours		1.00	1.00	0.86	1.08	0.04	1.10	0.29	0.76	0.74	0.63	1.06	0.57	
Prevailing wind		...	...	NNW 11	N. 17	S 10	S 12	N 15	N 13	N 12	NNE 10	N 12		
Prevailing clouds		...	...	...	...	...	...	Nim.	Nim.	Nim.	N.& C.C.	Nim.	Nim.	Nim.
Days with rain		13	5	24	12	1	14	13	11	14	18	26	19	170
Days with snow or hail		2	6	6	5	3	...	...	...	...	3	1	6	32
Days with thunder		...	...	2	. .	...	...	. .	2	...	...	2	2	8
Fine days		16	18	6	13	27	16	18	17	16	13	4	12	176

Summary, No. 2, of a Meteorological Journal, for the year 1836, *kept at Swansea.*

	Therm.	Month and Day.	Barom.	Dew-point.	Wind.	Weather.
Thermometer.						
9AM Maximum of thermometer for the year	78	July 5	29.36	...	SE	Tremendous storm of thunder and lightning
9AM Minimum of thermometer for the year	25	January 12	29.37	...	...	Snow all day.
5PM Maximum of thermometer for the year	68	October 7	29.16	52	SSE	Heavy rain at 10 P.M.
5PM Minimum of thermometer for the year	32	December 25	29.68	30	N	Fine and snow.
Greatest range of the thermometer in the 24 hours for the whole year...	28	*November 21	{29.96 / 29.86}	{39 / 45}	{S / W}	{Very fine. / Cloudy and rain}
Least range of the thermometer in the 24 hours for the whole year ...	1	January 4	30.30	...	...	Rain, A.M.
Month in which the greatest average daily range of the thermometer occurred in the 24 hours.....	14	March and May				
Month in which the least average daily range of the thermometer occurred in the 24 hours.....	7	January				
Barometer.	Max. Min.					
9AM Maximum of the barometer for the year	60 49	February 20	30.93	...	...	Fine with snow.
9AM Minimum of the barometer for the year	57 48	February 27	28 55	...	...	Cloudy with snow.
5PM Maximum of the barometer for the year	57 48	October 23	30.39	46	NNE	Fine.
5PM †Minimum of the barometer for the year	46 40	December 9	28.84	40	WNW	Showery.
Greatest range of the barometer in the 24 hours for the whole year.....	59 49	October 15	0.87	53	SSE & N	Showery.
Least range of the barometer in the 24 hours for the whole year.....	...	...	0.00			
Month in which the greatest average daily range of the barometer occurred	...	November	0.33			
Month in which the least average daily range occurred	...	May	0.12			
Hygrometer.						
9AM ‡Maximum dew-point for the year	72 61	August 16	30.00	64	S & SSW	Cloudy.
9AM Minimum dew-point for the year	36 35	October 29	30.35	22	NNE	Fine and snow.
5PM §Maximum dew-point for the year	61 58	October 18	29.93	57	N	Cloudy, with rain.
5PM Minimum dew-point for the year	38 33	December 30	30.25	23	NNE	Hazy.
Month in which the greatest mean dew-point occurred	...	September	...	51 in grs., 4.284		
Month in which the least mean dew-point occurred	...	December	...	41 in grs., 3.083		
Pluviometer.						
Month in which the greatest quantity of rain fell during the whole year	...	Nov., viz., 6.70				
Month in which the least quantity of rain fell during the whole year...	...	May, viz., 0.04	...	47	N	
Greatest quantity of rain fallen in the 24 hours, 1.86	54 48	November	28.71			
Month in which the greatest number of rainy days occurred, viz., 26...	...	November	...	...	...	Heavy rain.
Month in which the least number of rainy days occurred, viz., 1	...	May				

* This applies only to September, October, November, and December, when the evening observations were commenced, the observations of the barometer are here put down for the morning and evening.

† This applies only to September, October, November, and December, when the evening observations were commenced.

‡ This applies to August, September, October, November, and December.

§ This applies only to September, October, November, and December, when the evening observation was commenced.

METEOROLOGICAL REGISTRY, AT SWANSEA, FOR THE YEAR 1836.

The first two months of the foregoing table, from circumstances not necessary here to detail, are not so perfect as could be wished. Its publication commenced in March, 1835; in April, the results of the quantity of rain fallen were more accurately obtained by the use of one of Crossley's patent self-registering pluviometers, which, up to the present time, has been found to act in a most satisfactory manner. In August, another improvement was made, by the addition of Daniell's hygrometer; and in September, a double enquiry was commenced by an observation at five o'clock, P.M., in addition to the one previously made at nine, A.M., which has been regularly persevered in up to the present time. The barometer and thermometer (a self-registering one of course) are both good instruments, and can be relied on: they were originally placed outside a window looking to the north-east, and protected by a double screen of wood, with an inch of space left between the two cases, each of which was perforated with holes half an inch in diameter, in such a manner that no one hole was opposite another, thus excluding any rays of the sun and any rain, but at the same time allowing a free circulation of air. The position of the barometer, thermometer, and hygrometer, as now placed, is outside a window, protected in the same way, but looking to the west-south-west. The distance of the various instruments from the sea at high water mark is four hundred and fifty yards, and their elevation above the highest tide is as follows:—

	Ft.	In.
To the surface of the mercury in the cistern of the barometer	28	8
To the bulbs of the thermometer	30	7
To the coloured bulb of the hygrometer	31	1
To the receiver of the pluviometer	49	6

The hours of observation, as before stated, are nine A.M. and five P.M.

METEOROLOGICAL REGISTER, AT SWANSEA, FOR THE YEAR 1837.

The position of the various instruments has been altered since last year; they are at present placed outside a window looking to the north-east, and protected efficiently from the rays of the morning sun. Their distance from the sea, at high water mark, is about four hundred and fifty yards; and their elevation above the highest tide is as follows:—

	Ft.	In.
To the surface of the mercury in the cistern of the barometer	15	0
To the bulbs of the thermometers	19	0
To the coloured bulb of the hygrometer	17	0
To the receiver of the pluviometer	51	6

The hours of observation are at nine A.M. and five P.M. The instruments used are, a barometer with attached thermometer; a self-registering thermometer of Six's construction; a Daniell's hygrometer; Crossley's patent self-registering pluviometer; an Anderson's atmometer; and a Fahrenheit's thermometer of the usual construction, not self-registering.

Summary of a Meteorological Journal for the year 1837, *kept at Swansea.*

	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	For the year 1837.	For the year 1836.
Thermometer (Six's).														
9 A.M. Maximum of thermometer	61	63	69	65	64	75	81	79	71	65	56	56	79	78
9 A.M. Minimum of thermometer	24	32	27	30	39	47	54	46	46	41	33	31	24	25
9 A.M. Mean maximum of thermometer	48	53	54	54	38	65	70	67	62	59	52	48	...	56
9 A.M. Mean minimum of thermometer	37	42	35	38	47	55	60	59	53	51	43	42	...	47
9 A.M. Mean of the whole	42	47	44	46	53	60	65	63	57	55	47	45	...	52
5 P.M. Maximum of thermometer	61	65	69	71	67	79	81	80	76	68	58	60	81	68
5 P.M. Minimum of thermometer	32	41	31	37	39	50	57	55	52	45	36	31	31	32
5 P.M. Mean maximum of thermometer	47	54	53	58	59	67	72	70	64	60	52	49	...	51
5 P.M. Mean minimum of thermometer	40	46	42	47	52	59	65	63	58	54	46	45	...	46
5 P.M. Mean of the whole	43	50	47	52	56	63	68	66	60	57	49	47	..	48
Greatest range of thermometer in 24 hours	26	28	37	38	27	20	20	23	16	20	23	24	38	28
Least range of thermometer in 24 hours	1	8	6	6	8	6	4	4	1	3	3	13	1	0
Range for the whole month	32	33	42	41	28	32	27	34	30	27	25	29	...	53
Average daily range	13	15	21	23	14	12	12	12	11	10	11	11	...	9
Mean temperature for the whole month	42½	48	46	49	54	62	64	65	59	61	48	46	53.8	51
Barometer.														
9 A.M. Highest observation of barometer	30.45	30.19	30.28	30.83	30.29	30.08	30.18	30.22	30.19	30.60	30.23	30.30	30.83	30.93
9 A.M. Lowest observation of barometer	29.08	28.84	29.12	29.27	29.08	29.41	29.19	29.41	29.34	29.27	29.16	29.16	28.84	28.55
9 A.M. Mean height	29.79	29.73	29.84	29.71	29.85	29.87	29.90	29.86	29.80	30.00	29.74	30.	...	29.77
5 P.M. Highest observation of barometer	30.42	30.13	30.27	30.29	30.27	30.18	30.18	30.19	30.23	30.59	30.22	30.33	30.59	30.39
5 P.M. Lowest observation of barometer	29.05	28.28	29.14	29.22	26.06	29.36	29.01	29.28	29.09	29.19	29.01	29.32	28.28	28.84
5 P.M. Mean height	29.76	29.20	29.85	29.70	29.85	29.88	29.87	29.86	29.78	30.10	29.75	29.77	...	29.67
Greatest range of barometer in 24 hours	1.06	1.10	0.45	0.69	0.67	0.34	0.57	0.53	0.85	0.53	0.63	0.74	1.10	0.87
Least range in 24 hours	0.02	0.02	0.01	0.03	0.01	0.01	0.02	0.03	0.03	0.04	0.02	0.00	0.00	0.00
Range for the whole month	1.40	1.91	1.15	1.61	1.23	0.82	7.17	0.94	1.14	1.41	1.22	1.17	2.55	1.30
Average daily range	0.25	0.36	0.17	0.20	0.16	0.10	3.67	5.29	0.16	4.79	0.21	5.75	...	0.04
Mean height for the whole month	29.77	29.46	29.82½	29.70	29.85	29.87	29.88	29.86	29.44	30.05	29.74½	30.38	29.81	29.77
Total number of changes for the month														
Hygrometer (Daniell's).														
9 A.M. Maximum dew-point	48	50	44	52	55	64	65	65	63	60	55	54	65	64
9 A.M. Minimum dew-point	28	32	24	27	31	43	55	52	44	37	27	27	24	22
9 A.M. Mean dew-point	39	43	35	39	47	56	67	65	37	54	43	46	...	48
5 P.M. Maximum dew-point	47	49	45	54	66	65	69	69	66	65	55	52	69	59
5 P.M. Minimum dew-point	29	33	28	26	30	48	48	48	46	41	33	34	26	23
5 P.M. Mean dew point	39	43	36	39	47	57	70	68	56	53	42	47	...	45
Mean dew-point for the whole month	39	43	35	39	47	56	69	66	37	53	43	46	49	46
Mean dew point in grains, per cubic foot	2.284	3.308	2.497	2.839	3.876									
Pluviometer (Crossley's).														
Rain fallen for the month	2.89	3.35	0.91	1.62	1.29	1.41	1.86	2.07	2.47	3.92	4.25	2.43	28.47	38.86
Greatest quantity of rain in 24 hours	0.51	0.56	0.20	0.54	0.47	0.24	0.56	0.38	0.45	0.53	0.54	0.97	0.97	1.10
Prevailing wind	ESE.	ESE & SSW.	SE & E.	NNE.	E&NE.	NNW.	NNW. ESE.	NW & NE.	NNW.	NNW.	WNW&W.	SE.	NNW.	
Prevailing clouds	Nimbus.	N. & C. C.	C.C.&N.	N.&C.C.	C.C.&N.	N.	C. C. & N.	C. C. & N.	N.	N.&C.C.	N. & C. C.	N.&C.C.	N.&C.C.	N.&C.C.
Days with rain	16	17	11	8	7	8	9	14	16	18	24	13	161	170
Days with snow or hail	...	3	6	3	...	...	...	1	...	3	2	2	20	32
Days with thunder	...	1	...	...	3	...	1	3	2	1	...	...	12	8
Cloudy days	...	...	...	...	...	...	14	10	5	11	4	11	55	
Fine days	14	11	20	22	24	16	13	11	13	13	7	12	176	176
Days with fog or mist	5	6	9	5	6	5	3	3	7	11	8	11	79	

The neighbourhood of Swansea may be said to be particularly rich in specimens of natural history. I subjoin a list of the indigenous birds, fishes, and plants.

List of birds found in the neighbourhood of Swansea.

Falco Ossifragus
fulvus
Milvus
Buteo
ariparus
æruginosus
palumbarius
Lanarius
Pygargus
Nisus
Subbuteo
æsalon
Strix Bubo
flammea
stridula
Lanius Excubitor
Collurio
Corvus Corax
Corone
frugilegus
Monedula
glandarius
Pica
garrulus
Cuculus canorus
Yunx Torquilla
Picus viridis
major
Sitta Europæa
Alcedo Ispida
Certhia familiaris
Anas Cygnus
erythropus
Tadorna
Penelope
ferina
Crecca
Boschas
Alca arctica
impennis
Torda
Procellaria pelagica
Mergus Castor
Serrator
Albellus
Pelecanus Carbo
Colymbus troile (?)
Larus marinus
fuscus
ridibundns
canus
Sterna Hirundo
minuta
fissipes
Platalea Leucorodia
Ardea stellaris
major
Grus

Scolopax Arquata
Phæopus
rusticola
Gallinago
Gallinula
calidris
ægocephala
leucophæa
Tringa pugnax
Vanellus
nigricans
Interpres
hypoleucos
Canutus
maritima
Cinclus
Squatorala
Charadrius Hiaticula
Morinellus
pluvialis
calidris
Himantopus
Recurvirostra Avocetta
Hæmatopus Ostralegus
Fulica atra
Chloropus
Rallus Crex
aquaticus
Phasianus Colchicus
Tetrao Tetrix
Perdix
Coturnix
Columba Palumbus
Turtur
Alauda arvensis
pratensis
arborea

Sturnus vulgaris
Turdus viscivorus
pilaris
iliacus
musicus
Merula
torquatus
roseus
Ampelis garrula
Loxia Curvirostra
Coccothraustes
Pyrrhula
Chloris
Emberiza nivalis
miliaria
Citrinella
Schæniculus
Fringilla cœlebs
domestica
Montifringilla
Carduelis
Spinus
Lineta
montium
Muscicapa atricapilla
grisola
Motacilla Luscinia
modularis
Hippolais
Salicaria
Silvia
alba
flava
Boarula
Œnanthe
Rubetra
Rubecula

Motacilla atricapilla
Phœnicurus
arundinacea
Troglodytes
Regulus
sylvicola
Parus major
cæruleus
Parus ater
palustris
caudatus
Hirundo rustica
urbica
riparia
Apus
Caprimulgus Europæus

List of fishes, &c., found in the vicinity of Swansea.

Muræna Anguilla
Conger
Callionymus Lyra
Dracunculus
Trachinus Draco
Gadus Æglefinus
Callarias
Morhua
luscus
barbatus
Merlangus
Pollachius
Merluccius
Molva
Lota
Mustela
trifurcatus (?)
Blennius Gattorugine
trifurcatus
Gunnelus
Gobius niger
Cottus cataphractus
Gobio
Zeus Faber
Pleuronectes Hippoglossus
Platessa
Pleuronectes Flesus
Limanda
lævis
Solea
Rhombus
maximus
Labrus Tinca
variegatus
Perca fluviatilis
Labrax
Cernua
Gasterosteus aculeatus
Spinachia
Scomber Scombrus
Thynnus
Trachurus
Mullus Surmuletus
Trigla Lyra
Gurnardus
Cuculus
Cobitis Tænia
Salmo Salar
Eriox
Fario
Eperlanus
Lavaretns

Salmo Thymallus
Esox Lucius
Bellone
Taurus
Argentina Sphyræna
Atherina Hepsetus
Mugil Cephalus
Exocætus volitans
Clupea Harengus
Pilcardus
Sprattus
Alosa
Encrasicolus
Cyprinus Barbus
Carpio
Gobio
Tinca
Phoxinus
Leuciscus
Rutilus
Alburnus
Brama
Tetraodon Mola
Syngnathus Acus
Cyclopterus Lumpus
liparis
Lophius piscatorius
Acipenser Sturio
Squalus Canicula
Mustelus
Cornubicus
Cambricus
Acanthias
Squatina
Raia Torpedo
Batis
fullonica
clavata
Petromyzon marinus
branchialis
Gastrobranchus cæcus
Balæna Mysticetus
Physeter Catodon
microps
Delphinus Phocœna
Orca

A list of some of the rarer plants met with in the neighbourhood of Swansea.

Adiantum Capillus Veneris
Alisma ranunculoides
Alopecurus bulbosus
Anagallis, arvensis, var cærulea, and another beautiful variety, nearly white, with a pink eye
Anchusa sempervirens
Andromeda polifolia
Anthemis nobilis
Antirrhinum repens
Asparagus officinalis
Asperula cynanchica: this plant, until Hooker's last edition, was said by him *not* to grow in Wales; it does, however, abundantly in this locality

Aspidium lobatum
Oreopteris
Thelypteris
Asplenium marinum
viride
Atropa Belladonna
Bartsia viscosa
Botrychium Lunaria
Campanula hederacea
Carduus eriophorus
pratensis
Carex ampullacea
curta
dioica
limosa
pendula
Cerastium tetrandrum
Chara flexilis
hispida
pellucida, Cromlyn Bog
Chlora perfoliata
Cineraria palustris
Cladium Mariscus
Cochlearia officinalis
Anglica
Danica
Convolvulus Sepium
Soldanella
Crambe maritima
Datura Stramonium
Diplotaxis muralis
Draba aizoides
Drosera Anglica
Empetrum nigrum
Erica vagans
Eriophorum vaginatum
Erodium cicutarium; a variety of this plant is met with here, viz., triflorum
Erodium maritimum
Erythræa pulchella
Euphorbia Cyparissias
Portlandica
Fedia dentata
Festuca vivipara
Fumaria capreolata
Geranium pratense
sanguineum
dissectum
Gnaphalium dioicum
sylvaticum
margaritaceum
Helianthemum marifolium
Helleborus fœtidus
Hieracium paludosum
Hordeum maritimum
Hutchinsia petræa
Hymenophyllum Tunbridgense
Hypericum calycinum
Androsæmum
dubium
Inula crithmoides
Helenium
Juncus acutus
Lactuca virosa
Lathyrus sylvestris
Lavatera arborea
Leonurus Cardiaca
Lepidium Draba
ruderale
Linum angustifolium

Listera Nidus avis
Lithospermum purpureo-cæruleum
Lobelia Dortmanna
Matthiola sinuata
Melilotus leucantha
Mentha piperita
rotundifolia
Œnanthe pimpinelloides
Ononis antiquorum, growing with O. repens. A friend of mine has met with a plant nearly answering the description of O. reclinata mentioned by Hooker, growing near Swansea
Ophrys apifera
Orobanche elatior
major
Osmunda regalis
Oxycoccus palustris
Papaver Cambricum
Paris quadrifolia
Pilularia globulifera
Plantago maritima
Polygonun bistortum
maritimum
Polygonum Roberti, a species, as Mr. Babington observes, exactly intermediate between P. aviculare and P. maritimum
Polyganum mite
Polypodium vulgare
Phegopteris
Dryopteris
Potentilla verna
Prunus Padus
Pulmonaria officinalis
Pyrethrum maritimum
Pyrus Aria
torminalis
Quercus cenis (?)
Ranunculus Lingua
parvulus
Rhamnus catharticus
Ribes alpinum
Rosa surculosa
Rubia peregrina
Rubus saxatilis
Salicornia fruticosa
Salix repens
Salvia pratensis
Sambucus Ebulus
Sanguisorba officinalis
Saponaria officinalis
Saxifraga hypnoides
Schœnus albus
fuscus
Scilla verna
Scolopendrium Ceterach
Scutellaria minor
Senecio viscosus
Sison verticillatum
Solidago Virgaurea
Sparganium natans
Stellaria nemorum
Symphytum patens
Teesdalia nudicaulis
Thalspi alpestre
arvense
Tilia microphylla
Tormentilla reptans
Trifolium glomeratum

Trifolium scabrum
Triticum loliaceum
Trollius Europæus
Turrites hirsuta
Verbascum Blattaria
Veronica montana
Vicia sepium
Vinca major
Viola lutea

CRYPTOGAMIA.

Order 1.—*Filices.*

These have been incorporated with the preceding list.

Order 2.—*Equisetaceæ.*

Equisetum sylvaticum
Equisetum fluviatile

Order 3.—*Lycopodineæ.*

Lycopodium clavatum
Selago

Order 4.—*Marsiliaceæ.*

Pilularia globulifera

Order 5.—*Musci.*

Andræa alpina
Bartramia ithyphylla
pomiformis
Bryum compactum
elongatum
ventricosum
Diphyscium foliosum
Dicranum cerviculatum
Grimmia verticillata
Hypnum alpinum
commutatum
populeum
Polytrichum urnigerum
Pterogonium Smithii
Tetraphis pellucida
Tortula humilis
Trichostomum polyphyllum

Order 6.—*Hepaticæ.*

Jungermannia, a great variety is here met with, but a list of their names not having been made out, I am unable to supply the deficiency.

Order 7.—*Algæ.*

Halidrys siliquosa
Fucus vesiculosus
serratus
canaliculatus
Himanthalia lorea
Lichina pygmæa
confinis
Laminaria digitata
saccharina
bulbosa
Dictyota dichotoma
atomaria
Furcellaria fastigiata
Polyides rotundus
Delesseria sanguinea
sinuosa
alata
Hypoglossum
punctata
Nitophyllum Gmelini
laceratum
Rhodomenia Palmetta

Rhodomenia ciliata
palmata
Plocamium coccineum
Rhodomela subfusca
Laurencia pinnatifida
Chylocladia articulata
Gigartina confervoides
plicata
Chondrus mammillosus
Phyllophora rubens
Gelidium corneum
Ptilota plumosa
Iridæa edulis
Dumontia filiformis
Catænella epuntia
Porphyra laciniata
Ulva latissima
Linza
Enteromorpha compressa
Bangia fusco-purpurea
Bryopsis plumosa
Cladostephus verticillatus
spongiosus
Sphacelaria filicina
scoparia
cirrhosa
Ectocarpus granulosus
Polysiphonia urceolata
patens
parasitica
atro-rubescens
nigrescens
fastigiata
elongata
fusca
gracilis
Dasya coccinea
Ceramium rubrum
ciliatum
diaphanum
Plumula
repens
tetragonum
Griffithsia setacea
equisetifolia
Calithamnion Plumula
Turneri
lanosum
polyspermum
tetricum
tripinnatum
Rothii
lanuginosum
roseum
Conferva implexa
Melagonium
ærea
fucicola
flaccida
rupestris
lanosa
alternata
carnea
crispata
curta
diffusa
dissiliens
flacca
lætevirens
pellucida
tortuosa
Tyndaridea bipartita
scytonema
cornioides

Tyndaridea Myochrous
Calothrix distorta
mirabilis
nivea
Lingbya speciosa
Oscillatoria vaginata
Trentepohlia aurea
purpurea
Protonema castanea
umbrosa
Leptomitus nanus
minutissimus
Batrachospermum moniliforme
Draparnaldia glomerata
lubrica
pratensis
Licmophora flabellata
Gomphonema paradoxum
Schizonema Smithii

ADDENDA.

Bulbochæte setigera
Laurencia dasyphylla
obtusa
Chylocladia kaliformis
Halymenia furcellata
purpurascens
ovalis
Codium tomentosum
Gloionema fœtida
Lemania fluviatilis
Mycinema fulvum
Polyides lumbricalis
Vaucheria multicapsularis
Zonaria atomaria
dichotoma
Zygnema punctalis

Of the lichens and fungi I have not been able to obtain any list, at least one containing any number, or that I could depend upon.

I am well aware that the foregoing list is comparatively of no value without the insertion of the various habitats. For the information of those persons, however, who may feel disposed to visit this locality, I may mention that a list is deposited at the Royal Institution of this town by Mr. Dillwyn, collated up to the present time, and containing an accurate description of all the habitats of the various plants mentioned in the preceding list, and accessible to any visitor by applying to either of

the Honorary Secretaries. If any gentleman be inclined for an exchange of specimens, I shall at all times feel honoured by an application; and as I invariably endeavour to keep by me as large a stock of duplicates as I can, I shall perhaps be able to supply any demands to a reasonable extent that may be made.

ARTICLE IV.

ON THE

MEDICAL TOPOGRAPHY OF EXETER

AND

THE NEIGHBOURHOOD,

BEING A SKETCH OF THE GEOLOGY, CLIMATE, NATURAL PRODUCTIONS, AND STATISTICS OF THAT DISTRICT.

BY THOMAS SHAPTER, M.D.,
Physician to the Exeter Dispensary, Lying-in Charity, &c.

[CONTINUED FROM VOL. VI.]

PART II.—STATISTICAL AND MEDICAL.

In the paper which I had the honor of contributing to the former volume of the Society's *Transactions*, I so arranged the mortuary returns of Exeter and the neighbourhood as to show the influence which the climate of the different seasons, relatively, exerted on the population.

I shall now address myself to that portion of this statistical enquiry which bears immediately upon the general law of mortality of the district. In order better to elucidate the subject, I have, throughout this investigation, placed in contrast the law of life amongst the agricultural population with that

of the town. The agricultural population comprises the inhabitants of the rural parishes of Alphington, Ide, St. Leonard, and Heavitree; while the town population includes that of the various parishes of the city, together with that of St. Thomas. It must therefore be understood when I speak of the town parishes I refer to the latter, and when the country parishes are mentioned the four former are intended.

In 1800, the town population amounted to 19,587; 8,281 of which were males, and 11,306 were females. In the first ten years the increase upon the gross population* was 1,847, or 9.4 per cent., being an increase of 4.1 per cent. males, and 5.2 per cent. females. In the next ten years the increase amounted to the very considerable number of 5,290, or 24.6 per cent., being 13.1 per cent. males, and 11.4 per cent. females. In the succeeding ten years, i.e., from 1821 to 1831, the still greater increase of 5,721 took place, although, in reference to the population at the previous census, this increase amounts to but 21.4 per cent., or 10 per cent. males, and 11.3 per cent females. The gross increase in population of the town during thirty years, i.e., from 1800 to 1831, amounts to 12,858, which is equivalent, on the whole number, to 65.6 per cent., which is rather more than two-thirds of the whole. The increase during this period consisted of males 32.2 per cent., and of females 33.3 per cent.

I have already stated that the male population in 1800, amounted to 8,291, which is 42.4 per cent. upon the whole population; from this time to 1811, the increase of this sex amounted to 819, or 9.7 per

* *Vide* Appendix, table 1.

cent.* In the succeeding ten years the increase amounted to 2,826, or 31,05 per cent.; from which period to 1831, the increase was 3,678, or 30.8 per cent. The total increase upon the thirty years amounts to 6,323, or 76.3 per cent.

The female population in 1800, amounted to 11,306, which is 57.6 per cent. on the whole population. From this time to 1811, the increase was 1,028, or 9.09 per cent. From 1811 to 1821, the increase amounted to 2,464, or 19.09 per cent. From 1821 to 1831, the increase was 3,043, or 20.5 per cent. The total increase of female population in the thirty years, i.e., from 1800 to 1831, amounts to 6,535, or 57.8 per cent.

Before I proceed to make any observations upon the result of the foregoing investigation, I shall add the statement of the rural population, so that we may thus be enabled to compare them together.

In 1800, the rural population amounted to 2,318, of whom 1,091 were males, and 1,227 females. In the first ten years the increase upon the gross population was 325, or 13,9 per cent., consisting of an increase of 7.6 per cent. males, and 6.3 per cent. females. In the next ten years the increase amounted to 610, or 23 per cent., being 7.0 per cent. males, and 16.0 per cent. females. In the succeeding ten years, i.e., from 1821 to 1831, the increase amounted to 1,139, or 35 per cent., being 15.7 per cent. males, and 22.0 per cent. females. The gross increase of population in thirty years, i.e., from 1800 to 1831, amounts to 2,074, or 88.9 per cent., consisting of 37.7 per cent. males, and 51.6 per cent. females.

* *Vide* Appendix, table 2.

I have just stated that the male population in 1800, in the rural districts, amounted to 1,091, which is 42.7 per cent. upon the whole population. From this time to 1811, the increase in this sex amounted to 178, or 16.3 per cent.* In the succeeding ten years the increase amounted to 186, or 14.6 per cent.; from which, to 1831, the increase was 512, or 35.1 per cent. The total increase upon the thirty years amounts to 876, or 80.2 per cent.

The female population in 1800, was stated to be 1,227, or 52.9 per cent. upon the whole. From this time to 1811, the increase amounted to 147, or 11.9 per cent. From 1811 to 1821, the increase of female population on itself was 424, or 30.8 per cent. From 1821 to 1831, the increase was 727, or 40.4 per cent. The total increase upon the thirty years, i.e., from 1800 to 1831, amounts to 1,198, or 97.6 per cent.

On comparing the state of the population in the town and rural districts from the statements now made, we find that, in 1800, there were nearly 4 per cent. more females in Exeter than in the country parishes, and, consequently, that in these latter the advantage was to the same extent on the side of the male population. By comparing the increase in both sexes in the different periods of ten years, we find that in the first decade, i.e., from 1800 to 1811, the country district increased 4 per cent. on the whole population over that of the town. In the following decade the town increased $1\frac{1}{2}$ per cent. over the rural; while, between 1821 and 1831, the country increased over the town $4\frac{1}{2}$ per cent.

* *Vide* Appendix, table 2.

During the whole thirty years the rural districts have increased more than the town 23.3 per cent.

One very curious fact presents itself connected with the relative advance of male and female population as shewn in these tables; it is that in the period between 1811 and 1821, while there was a disproportioned increase in the rural district of the female population over that of the male, (rather more than double,) there was in the city population an increase of male population over the female to the extent of 12 per cent. Were it not for this latter fact, we might be inclined to account for the deficiences of the male sex in the country, by supposing that the wars of that period had drained and kept it under; but when we take it in connexion with the increase of males in the city, we must account for the discrepancy by supposing that there was a migration of the male population, during this decade, from the country into the city. Taking the whole period of thirty years, this discrepancy still obtains, for the increase of males over females in Exeter amounts to 18.5, while in the rural district the females have increased 17.4 over the males. From this prevailing through so long a period, would lead to the feeling that there may exist some general law of increase of male population applicable to the town, and which acts in disfavour to the country, either by emigration, or an opposing relation of births and deaths in the two sexes, &c. Be this as it may, the fact is a singular one, and well worthy of observation. We shall conclude this history of the progressive state of the population during the last thirty years, by stating that the mean increase,

as deduced from its progression during the three decades, is rather more than 2 per cent. annually in the town, and nearly 3 per cent. in the country, and that the mean annual increase in the rural district is 1 per cent. over the town.

Before leaving this subject, it may not be inapposite to direct attention to the fact that the whole tenor of these observations are opposed to the theory of Dr. Malthus. Notwithstanding the increase of population has been shewn to be very considerable, it yet in no way approximates to a geometrical ratio. We shall presently see that it is owing to the laws of death and their governed applications the possibility of a geometrical increase of mankind is precluded, and has never been suffered to take place.

Mr. Sharon Turner says that the state of every population is the complicated result of the combination and operation of three main elements, which are inseparable from it, and have always accompanied and composed it.* These are marriages, births, and deaths, and that all these are naturally linked together, and cannot be severed.

I shall commence with the *marriages*. On this subject, however, little need be said. In ten years, with a population of 28,242, the number of marriages that took place amounted to 3,179, which gives an annual average of 1 in 88 (1.09 per cent.); so that out of 88 persons, two are annually contracted together in marriage. This is very greatly above the average of England, which amounts to but 1 marriage in 129 persons. In Devon, the average

* Page 103.

is 1 in 134. The nearest approach in all England to the average in Exeter, is in the county of Middlesex, which is 1 in 102. It is remarkable that there is really a greater proportion of marriages in Exeter to the population than has been supposed to occur. Mr. Sharon Turner gives as the extreme limits 1 in 90 and 1 in 175.

Births.—According to the parliamentary returns of 1831, the average number of births attending each marriage, amounts during ten years in the city of Exeter to but 2.3 (the average of all England being 4), and they bear a proportion to the whole population of Exeter of 2.6 per cent.

According to the returns which I have had made, and the accuracy of which I can fully depend upon, the births in ten years, i.e., from 1825 to 1834 inclusive, in the town parishes, amounted to 8,804 (consisting of 4,640 males and 4,164 females) which gives an average of 1 in 37 (2.7 per cent.*)—an average which corresponds with that of the whole kingdom In the country parishes, the births amounted in the same period to 1,346, or 1 in 32 annually upon the whole population (3 per cent.) The advantage on the part of the rural district very well agrees with the greater proportionate increase in population which we have elsewhere pointed out this district has enjoyed over the town, viz., in proportion of 35 over 21.4. The proportion of males born over the females, though not to any very great extent, yet must not be omitted to be stated, as it bears upon the question of mortality to be shortly spoken of. In the town parishes, out of 100,

* *Vide* Appendix, table 3.

52 are males and 48 females. In the country parishes, out of every 100, 51 are males and 49 are females.

"A limitation to the number of births is found in the maternal period of the female sex existing only during a portion of her life. The beginning year and the ending year of this, varies with the climate, but the duration of it is very similar, and we may take thirty years as the average of its general continuity."* The natural possibility of becoming mothers, lasts in our regions from fifteen to forty-five years of age. In the eastern and more tropical countries it commences and terminates sooner. But the ages above mentioned may be considered as the ordinary limits of the maternal state; consequently the increase of the population anywhere, can never be greater than such as that proportion of its females allows, who are between those ages.

The number of women within the limits of the maternal state in Exeter amounts to 8,526, or about half of the whole female population (this very nearly agrees with observed proportions in Saxony and North America); it therefore follows, as the annual averaged number of births amount to 880, and which number represents those who are carrying children, that 1 in 96 of those capable, are in the situation to increase the population at every period.

The statistics of the Lying-in Charity of this city are very interesting. I have selected for illustration the same period that generally has engaged my attention for the purposes of this investigation, i.e.,

* Sharon Turner, p. 112.

from 1825 to 1834 inclusive. The annual averaged number of females who have applied for this charity are 144, the ages of whom averaged thirty-two years and a half; the number of children they had already borne amounted to five and one twenty-fourth, of which three and a quarter were reported as living. If we add to the children born the child that is to be produced by the same mothers, we have the average of six and one-twelfth, a much larger proportion than can be contemplated to be the real average of the city ; but then this excess may be easily accounted for by such an average not including those who never become mothers, and moreover it is not improbable that these women thus obtaining relief, receive charity from the very circumstance of their being persons with large families. It is the custom of this charity that the women report the result of their confinements ; these reports in the ten years amounted to 836 ; the births attending which were stated to be 420 males and 416 females. Of these, 34 were still-births, or 1 in 24, a most enormous proportion, and would argue that those so poor as to require this charity, are much more liable to produce dead births than other women in a better station of life. Of these 836, 9 were twin births, i.e., rather more than 1 in 100 is a twin birth (1 in 93). Of these 9 twin births, 2 were girls, 3 were boys, 2 were boy and girl, and 2 were not reported.

Having passed in review two of the conditions attendant on the law of population, I shall now proceed to a consideration of the third, viz., that of mortality. To do this, I have arranged the

mortality of the city and its rural district in several separate tables;* the more striking results of which I shall endeavour to explain in as few words as I well can, and contrasting them, for the sake of better illustration, with the results published in the most accredited tables.

We will just state the condition of the population in 1831. The census of this year, as my tables are composed of results gleaned from a period of five years previous and five years subsequent to this time, offers the fair average for our purpose. The population of Exeter in 1831, together with that of St. Thomas, is stated to be 32,445, the males being 14,604, or 45 per cent., and the females 17,841, or 55 per cent. The deaths during the period of ten years from 1825 to 1834, amounted to 7,362, which are in the proportion of 1 in 44 to the whole population (or 2.2 per cent.) These 7,362 deaths comprised 3,813 males, or 45 per cent., and 3,549 females, or 55 per cent.

The population of the country district in 1831 amounted to 4,392, the males being 1967, or 44.8 per cent., and the females 2,425, or 55.2 per cent. The deaths during the above period of ten years amounted to 923 (consisting of 449 males and 474 females), which is 1 in 47, or 2.6 per cent.

From what has been previously stated when speaking of the births of this district, it will be seen that there is a surplus in their favour—in the town of 1442, and in the country of 423;† so that the births of the town exceed the deaths 18 per cent.,

* *Vide* Appendix.

† *Vide* table 3.

and in the country 22 per cent. This excess agrees tolerably well with the proportions of the kingdom of Great Britain generally, which amounts to 20 per cent. Considered with respect to the whole community, Mr. Sharon Turner observes* the latter period of the last census presents pretty nearly the proportion of four burials to six births in our highly favoured, healthy, and prosperous country. As this proportion has not been exceeded in Exeter, may it not be inferred that the great increase of population which has taken place must be mainly attributed to immigration rather than to an overflowing of its own fountains. I shall here introduce various tables, which are the results of different arrangements of the mortuary returns, and then proceed to point out such prominent facts as they indicate in regard to the law of mortality, as applicable to the district under investigation.

Table 1.—*Relative proportion of deaths, at all ages, in Exeter, (town and country,) in Devon, and in Carlisle, the whole population being assumed to be* 10,000.

	Birth to 10.	10 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 to 90.	90 to 100.	100 to
Exeter { Town	4242	461	739	739	719	780	836	907	510	61	6
Exeter { Country	4052	564	737	606	640	834	813	1094	563	87	10
Devon	3641	503	703	628	587	693	1019	1288	804	129	5
Carlisle	3569	384	462	576	671	817	1244	1440	732	98	7

* Page 149.

Table 2.—Law of mortality of Exeter, (town and country,) stated relatively with Devon and Carlisle, the total number of births being supposed to be 10,000, *from which it appears there will be alive at the several years of—*

	10.	20.	30.	40.	50.	60.	70.	80.	90.	100.
Exeter { Town	5758	5297	4558	3819	3100	2320	1484	577	67	6
Exeter { Country	5948	5384	4647	4041	3401	2567	1754	660	97	10
Devon	6359	5856	5153	4525	3938	3245	2226	938	134	5
Carlisle	6431	6047	5585	5009	4338	3521	2277	837	105	7

Table 3.—Actual number of persons alive in 1831, *at each age, in Exeter, presuming that they are in the same proportion as in* 1821.

	Birth to 10.	10 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 to 90.	90 to 100.	100 to
Males	4013	3002	2048	1969	1500	997	679	324	74	1	
Females	3722	3402	3556	2372	1794	1373	965	483	153	21	
Both	7735	6404	5604	4341	3294	2370	1641	807	227	22	

Table 4.—Proportional number of persons alive, at all ages, at Exeter and in all England, supposing the whole population of both sexes to be 10,000.

	Birth to 10.	10 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 to 90.	90 to 100.	100 to
Exeter	2387	1976	1729	1340	1012	732	506	249	63	6	
England	2796	2104	1583	1182	936	609	452	225	61	5	

Table 5.—Annual proportion of deaths to the living inhabitants in the undermentioned places.

Exeter.		Devon.	England.
Town.	Country.		
1 in 44.	1 in 47	1 in 58.	1 in 49.

Table 6.—Mortality per cent. in the undermentioned places:—

	Exeter.		Devon.	Northampton.
	Town.	Country.		
Birth to 10 ...	42	40	38	42
10 to 20	8	9	9	9
20 to 30	14	13	12	14
30 to 40	16	13	12	17
40 to 50	18	15	13	21
50 to 60	25	24	18	28
60 to 70	36	31	31	39
70 to 80	61	62	58	61
80 to 90	89	80	86	90
90 to 100.....	91	90	96	100
100 to	100	100	100	

Table 7.—Results of mortality arrived at from different sources.

Out of persons.	Who attain the age of	There die before the age of	According to the			
			Carlisle table.	Experience of the Equitable Society.	Northampton table.	Exeter city table.
6460	10	20	370	309	618	515
6090	20	30	448	443	886	849
5642	30	40	567	579	965	914
5075	40	50	678	652	1086	955
4397	50	60	754	900	1260	1106
3642	60	80	2690	2244	2805	2229

It appears from an examination of these tables that more die (very considerably so) in Exeter between birth and ten years of age, than is the case either in the county of Devon or in Carlisle, the mortality of which place is assumed by Milne to be a fair criterion of the mortality of England. This also holds good in respect to the rural district. It is not a little singular that in the succeeding decade, i.e., from 10 to 20, though more deaths occur in Exeter than do at Carlisle, yet they are fewer than is the case in the agricultural district of the city or in the county, which would argue that town life was more favourable to population in these years than country life. Between twenty and thirty the mortality both of Exeter and the neighbourhood is far in excess of the mortality given in the Carlisle or Devonshire returns. In the next period, that is from thirty to forty, though the mortality of the town parishes is in excess of that of the Carlisle tables, and of the returns of the county of Devon generally, yet the mortality of the rural district of the neighbourhood is below that of Carlisle. The same holds good as regards the period between forty and fifty, as also between fifty and sixty, and sixty and seventy.

We now arrive at a different point of the tables, i.e., when three score years and ten of life have been completed, wherefore a large proportion of deaths rather speaks of those who have lived to a good old age. In this respect the rural parishes of this district are conspicuous; for out of 10,000 we find 1754, of whom 1094 died before the age of eighty was completed; while in Exeter there remain but

1494, but of whom only 907 died; while we find at Carlisle but 1440, and in Devon 1288. In the succeeding period, i.e., between eighty and ninety, we find both Carlisle and Devon ranging very high in their rate of mortality both over the rural district of Exeter and its city, the mortality of which last has the lowest range. In the following period, i.e., from ninety to a hundred, Exeter and the surrounding country have less mortality than either Devon or Carlisle, and this latter is more favourable to life than Devon at this period. The concluding period, which includes all those above a hundred years of age, shews that in the rural district there are to die, 10; in Carlisle, 7; in Exeter, 6; in Devon, 5. From hence we may infer, that though both Exeter city and rural district are not propitious to youthful existence, yet that they are particularly so to those advanced in years, or those who have passed the meridian of life. Much the same law prevails, as this would indicate, in Saxony, where considerably more than half die under six, while the greater proportion of the other moiety attain a fair old age.*

By reference to table No. 2, in which are stated the number living, of 10,000 births at the different decades of life, it will be seen that at the age of twenty there are but very few more than half the population survivors; wherefore we may state, that of those born alive, half do not attain the period of life in which they are capable of regenerating their species, while rather less than one-third of these 10,000 born survive such period. From the excess of persons who die in the early periods of life, it necessarily follows that there are fewer left to attain

* Turner, p. 160.

the more advanced periods; it is, therefore, worthy of remark, that the number who are alive at a hundred in Exeter is greater than in Devon generally, while in the rural districts of this city there is actually a larger proportion living at this very advanced period of life than at Carlisle or in Devon.

As a necessary consequence of the observations from which the foregoing tables have been constructed, we may ascertain the number living out of every 10,000 *births* in every age. Thus we see the number of survivors in Exeter at ten years of age amounts to 5,758, and so on through every period of life.* As far as a consideration of the probabilities of life is concerned, this is a very useful table, but it cannot be esteemed complete, unless observations have been made on the actual number living at each period of life. Here I was threatened with difficulty (for no such observations have been published on the population of this period), and which I only surmounted by taking the census of 1821, and from the data there given deducing the relative proportionals. Having done this, I have constructed two tables from the first, by which (table 3) we can at sight see the actual number of persons alive in 1831, at each age, in Exeter. And from the second table (No. 4), we can see the proportional number of persons alive in Exeter, supposing the whole population of both sexes to be 10,000. These tables now become important in any calculations upon the chances of life. Mr. Finlaison says in his report made before the Committee of the House of Commons, that the basis of all questions having reference to the

* *Vide* tables 3 and 4.

failure or continuance of life, is well known to be the law of mortality, or the probability that a human being who may be in any given year of age, will die in that same year. If this be accurately determined for each and every single year in the natural life of mankind, all other questions whatsoever, of a financial nature, are capable of precise solution, being merely so many arithmetical results. The said probability, however, can only be arrived at through the experience of what has already happened to a great number of other human beings, all in the very same circumstances with the person whose case is under consideration.

Let us see, for the sake of example, how we may deduce from the experience of our returns, what is the probability of life of any individual in Exeter. Say we take one at thirty years of age, what chances has such person of attaining his fortieth year? We may see by reference to the returns there are living at this age 3,356, 544 of whom die before the next decade is completed; therefore, any person in Exeter who is thirty years of age, has 2,812 chances of living till he is forty, and 544 of dying before that period, or, in other words, it is more than five to one that he will be living at forty. Let us apply the same law, and see what are his chances of surviving to the age of seventy. At thirty, 3,356 are living, while at seventy there are but 1093 survivors; 2,263 deaths having occurred during the intermediate years; there are, therefore, 2,263 chances of his dying, and but 1093 of his surviving, or the chances are two to one against his arriving at this age. The same law may be applied to any period of life.

I have constructed three other tables (tables 5, 6, and 7), which will illustrate the mortality of Exeter as compared with other places. In table 5 is shewn what number of the living supply one death. Exeter ranges very low, 1 in 44, while England is stated to be 1 in 49. In table 6, where the mortality is stated in reference to its proportion per cent., the coincidence will be seen to be very remarkable between Exeter and Northampton. The advantage, however, is much in favour of Exeter, the mortality being considerably in excess at Northampton. Table 7 is interesting, as shewing the relation between the mortality of Exeter and that stated in the Carlisle tables, and from the experience of the Equitable Society.

I shall conclude this subject by appending the following curious statement of the mortality in the several parishes of the city and country deduced from my own returns. The differences in amount will be observed to be very remarkable. Those parishes whose range of mortality is so very low, occupy the central and well-inhabited portion of the city. This low statement may most probably be caused by the retiring of trades-people; and their servants, in cases of sickness and old age, being removed to the other parts of the town, and in this way disproportionably increasing the rate of the other parishes. Among the country parishes, Heavitree and St. Leonard rate as having a much less mortality than Ide or Alphington. This may be explained by the immense emigration that has taken place into the former, and which has not been the case with the two latter parishes.

Table 8.—Population, actual mortality, and mortality per cent in the several parishes of the city of Exeter and St. Thomas.

	Population in 1831.			Actual mortality in ten years.			Mortality per cent.		
	Males.	Fem.	Total.	Males	Fem.	Total	Males.	Fem.	Total.
St. Martin	113	185	298	7	11	18	6.19	5.94	6.04
St. Petrock	106	161	267	12	10	22	11.32	6.21	8.61
St. Stephen	193	289	482	22	22	44	11.40	7.61	9.12
St. Kerian	221	249	470	44	31	75	11.90	12.45	15.95
Allhallows, Goldsmith St.	187	233	420	33	40	73	17.64	17.16	17.38
St. John	257	329	586	44	65	109	17.12	19.75	18.26
St. Lawrence	291	329	620	67	48	115	23.02	14.58	18.54
St. Olave	446	518	964	96	98	194	21.52	18.91	20.12
The Close	268	407	675	65	74	139	24.25	18.18	20.59
St. David	1450	1628	3073	334	303	637	23.03	18.61	20.69
St. Thomas	1921	2282	4203	468	405	873	24.36	17.74	20.77
St. Pancras	173	206	379	38	37	75	21.96	17.96	19.78
Trinity	1251	1596	2847	347	252	599	27.72	15.78	21.03
St. Paul's	749	889	1638	172	175	347	22.96	19.68	21.18
Allhallows, Walls	401	488	889	99	95	194	24.68	19.46	21.82
St. Mary Arches	345	363	708	77	88	165	22.31	24.24	23.30
St. Edmund	713	810	1523	194	165	359	27.20	20.37	23.57
St. Sidwell	2758	3844	6602	907	857	1764	32.88	22.29	25.24
St. Mary Major	1665	1851	3516	452	464	916	27.14	25.06	26.05
St. George	447	461	908	133	119	252	29·75	25.81	27.75
St. Mary Steps	616	642	1258	202	189	391	32.79	29.43	31.08
Total	14571	17760	32331	3813	3548	7361	26.16	19.97	22.76

Table 9.—Population, actual mortality, and mortality per cent. in the country parishes of Exeter.

	Population in 1831.			Actual mortality in ten years.			Mortality per cent.		
	Males.	Fem.	Total.	Males.	Fem.	Total.	Males.	Fem.	Total.
St. Leonard	196	271	467	38	38	76	19.38	14.02	16.27
Heavitree	823	1109	1932	176	170	346	21.38	15.32	17.90
Alphington	583	653	1236	144	162	306	24.70	24.80	24.75
Ide	365	392	757	91	104	195	24.93	26.53	25.73
Total	1967	2425	4392	449	474	923	22.82	19.54	21.01

[THE MEDICAL STATISTICS OF THIS DISTRICT WILL BE PUBLISHED IN THE NEXT VOLUME.]

APPENDIX.

Table 1.—*State of the population in Exeter and neighbourhood.*

Acres.	1831.	Houses.				Occupations.			Persons.				Agriculture.			Employed in manufacture or in making manufacturing machinery.	Employed in retail trade or in handicraft as masters or workmen.	Capitalist, bankers, professions, and other educated men.	Labourers employed in labour not agricultural.	Other males 20 years of age (except servants.)	Servants.		
		Inhabited.	Families.	Building.	Uninhabited.	Families chiefly employed in agriculture.	Families chiefly employed in trade and handicraft.	All other families not included in the two classes.	Males.	Females.	Total.	Males 20 years of age.	Occupiers employing labourers.	Occupiers not employing labourers.	Labourers employed in agriculture.						Male.		Fem.
																					Twenty years of age.	Under twenty.	
1800	Exeter	4056	6038	80	279	105	3004	2929	12683	15559	28242	6573	15	25	156	58	3655	617	1260	534	253	55	1879
3730	St. Thomas.....	635	894	19	44	131	591	172	1921	2282	4203	1098	31	8	175	30	206	165	370	112	11	3	176
	Total.....	4691	6932	99	323	236	3595	3101	14604	17841	32445	7671	46	33	331	88	3861	782	1630	646	264	58	2055
2720	Alphington.....	237	258	3	14	96	59	103	583	653	1236	325	25	17	93	0	84	44	41	13	8	1	106
3290	Heavitree	348	393	6	26	83	38	272	823	1109	1932	415	19	18	83	0	39	5	49	184	18	11	155
1120	Ide.....	135	172	2	5	83	47	42	365	392	757	151	12	5	42	0	26	1	4	48	3	5	8
80	St. Leonard.....	62	70	26	5	6	18	46	196	271	467	69	0	0	7	1	10	20	20	4	7	1	75
	Total.....	782	893	37	50	268	162	463	1967	2425	4392	960	56	40	225	1	159	70	114	249	36	18	344
	Total of town and country	5473	7825	136	373	504	3757	3564	16571	20266	36837	8631	102	73	556	89	4020	852	1744	895	300	76	2399

Table 2.—Increase of population.

	From 1800 to 1811.			From 1811 to 1821.			From 1821 to 1831.			From 1800 to 1831.		
	Males	Fem.	Total.	Males	Fem.	Total.	Males	Fem.	Total.	Males	Fem.	Total.
Town...	4.1	5 2	9.4	13.1	11.4	24.6	10.	11 3	21.4	32.2	33.3	65.6
Country	7.6	6.3	13.9	7.0	16.0	23.	15.7	22.0	35.	37.7	51.6	88.9

Table 3.—Proportion of males to females.

	1800.		1831.	
	Males.	Fem.	Males.	Fem.
Town	42.4	57.6	45.	55.
Country ...	47.	52.9	44.8	55.2

Table 4.

	Increase of male population upon itself.				Increase of female population upon itself.			
	1811.	1821.	1831.	1800 to 1831.	1811.	1821.	1831.	1800 to 1831.
Town	9.7	31.05	30.8	76.3	9.09	19.09	20.5	57.8
Country ...	16.3	14.6	35.1	80 2	11.9	30.8	40.4	97.6

Table 5.—Number of births and deaths from 1825 to 1834.

	Town.			Country.		
	Males.	Females.	Both.	Males.	Females.	Both.
Births	4640	4164	8804	692	654	1346
Deaths	3813	3549	7362	449	474	923
Surplus of births over deaths ...	827	615	1442	243	180	423

[THE CONCLUDING PORTION OF THESE APPENDICES WILL BE PUBLISHED IN A FUTURE VOLUME.]

PART III.

ESSAYS AND CASES.

ARTICLE V.

ON A

PECULIAR AFFECTION OF THE UVULA.

BY EDWARD THOMPSON, ESQ.,

Surgeon to the Whitehaven Infirmary.

THE occasional fatal termination which takes place in what was at the time probably considered as a slight attack of quinsey, and the implication of medical character which such an event is always sure to entail, and perhaps irreparably injure, call for the most marked attention in the most slight, as well as in the more aggravated cases of this affection. The causes of sudden death, consequent upon supposed tonsillar inflammation, have, there is reason to think, not unfrequently been mistaken,—false opinions entertained respecting the death,—and garbled and unphilosophical statements advanced to satisfy distressed friends.

That the common cause of death, in apparently simple cases of quinsey, arises from the evacuation of matter contained in the tonsil or its neighbourhood I much doubt, never having witnessed in any the least

Mr. Thompson's Case of
Diseased Uvula.

danger induced by very large collections, not only in the tonsils, but in different parts of the pharynx, breaking and filling up the whole of the posterior palate, leaving the glottis, and passing into the trachea and esophagus. I have in several cases allowed the matter to collect in quantity in the pharynx, and have known it to descend into the trachea, and seen it quietly coughed up without any of those violent and dangerous spasms which a less bland fluid would have excited. In one case of abscess, at the posterior part of the pharynx, after opening it, I allowed the fluid to flow as it listed, preventing its escape by the mouth in order to learn whether any danger would arise from the matter being hastily evacuated at the very entrance of the respiratory organs; but I did not perceive it, the pus being partly swallowed or received into the larynx without the person exhibiting any symptom of suffocation farther than what might have been expected from the presence of the fluid, but which he was enabled to free himself of at will. With respect to the presence of tonsillar abscess, I could never discover any danger from it provided it did not implicate the velum or the neighbourhood. In this case other parts were concerned, which I shall afterwards show contributes generally, if not always, to the danger.

These observations had long ago convinced me that death in cynanche is seldom or never caused by suffocation arising from the effusion of matter into the larynx, or from the pressure of tonsillar abscess which only prevents the admission of air by the mouth, as is commonly believed, but from

some other cause, which, in the hasty examination of a simple case, had been overlooked. In complicated inflammatory action of the fauces, &c., such as the one so well described by Aretæus, at a later period by Le Dran, who has probably given the best description, although not referred to by Dr. Craigie, and more lately by the latter author, death is evidently produced either by an extension of disease to the larynx, or by the inability of the parts to perform their functions; but in simple inflammation of the throat, when death takes place, we must look for another cause, and, from observation, I am inclined to think that in those cases of sudden fatal termination, unpreceded by any dangerous symptom, enlarged uvula in all cases will be found to be the cause of death.

It is not my intention to refer to all the varieties of uvular enlargement, but merely to those alterations, the product of inflammation, either originating in this part or in the neighbourhood. Vehement inflammation of the uvula has long been considered an affection of extreme danger. Celsus, although he does not inform us how it endangers life, observes, "*uvea vehemens inflammatio terrere quoque debet;*" and other authors have borne testimony to the danger of inflammation attacking the uvula. Diseased condition of it has been more frequently viewed as connected with inflammation of the mucous covering of the fauces or glands of the tonsils, and more particularly in that form of disease described by Le Dran. In the latter affection the uvula is always implicated, being fleshy and elongated. In a form of disease described by Ramazzani, Forrestus, and Wierus,

the uvula is stated to have been a cause of death in many instances, and Thomas Bartholin alludes to its enlargement. Cortesius relates cases of dangerous enlargement of the uvula, and remarks, *ad prædictarium partium, uvulæ tonsillarim inflammationem subsequebatur interdum materia quodam pituitosa a capite tam repente et inopinate descendens, ut miseri ægro tantes subito suffocarentur.* It will be observed that he errs in looking upon the humour descending into the trachea as the cause of death; but the enlargement of the uvula closing up the glottis was the probable cause.

Elongation of the uvula occasionally destroys life in typhus fever, closing up the rima glottidis, and producing almost instant suffocation. From chronic inflammatory action, the palatine arch is so much affected and relaxed as to cause injurious descent of the uvula, without the latter being diseased; but the most common form of affection consists in fleshy enlargement and elongation of the substance of the uvula itself, and which, when it takes place rapidly, is extremely dangerous. This is the kind of enlargement described by authors. There is, however, another alteration which arises from active inflammation of the uvula, more dangerous in consequence of the deceptive nature of it, and as it has not, as far as I am acquainted, been alluded to by any author, I shall briefly describe it, being fully impressed with the necessity of an acquaintance with an affection of the most dangerous character, and which I believe to be much more probable to produce fatal consequences than any other disorder to which the uvula is exposed. The affection consists

in the elongation of the mucous coat of the uvula, by the gradual effusion of lymph, to such an extent as to endanger life, by its being inspired into the glottis, thereby causing spasm, and putting an immediate stop to respiration. The extent to which the elongation takes place occasionally is remarkable; I have seen it, in one instance, above two inches in length. The fluid contained in the expansion of the mucous coat is of a light amber colour, and, along with the membrane, so pellucid that the handle of a tea-spoon can readily be seen through it when placed behind the appendage. The body of the uvula appears, on examination, to be enlarged to a slight degree, partaking of the inflammation which extends across the palatine arch. I have not observed the tonsils enlarged.

The symptoms are those of simple cynanche, in the first instance; but afterwards a huskiness of voice, with an occasional brief loss of it, are superadded. These do not long continue in the same state, for as the disease advances, which, from what I have witnessed, it does very rapidly, another and more awful symptom arises—it is that of a distressful feeling of suffocation, perhaps slight at first, but which increases, and cannot, as at the commencement, be relieved by swallowing fluid. A superficial examination shows the throat inflamed, and, with the exception of the uvula, not much swelled. The latter may be seen slightly enlarged, but apparently of its usual length, which the hasty enquirer, judging by the red termination of it, may be easily deceived in. If death does not take place before he has made himself acquainted with the

nature of the complaint, he may think the larynx is inflamed, or, which is more probable, œdema of the glottis to be present. Of the former, an examination of the symptoms will enable him to judge; of the latter, the finger will inform him of its non-existence. The frequent act of swallowing, carrying back as it does the flexible appendage into the œsophagus, is the cause of deception in this interesting yet dangerous affection, and is one reason of the great freedom, for a time together, from any distressing symptom, but which becomes suddenly changed by a cough and rapid inspiration. The position by such act is immediately altered, and the appendage may be instantly puked as it were into the larynx. The consequences of such a change may be at once imagined. The patient whom we had left with every assurance of a rapid recovery, may be instantly destroyed, or placed in a situation of the greatest hazard. Although I cannot from personal observation relate a case of sudden death arising from supposed slight inflammation of the tonsils, &c., I have known it occur in the practice of others, and, from the symptoms described, am fully satisfied that the death arose from the condition of the uvula above related. In no case did I ever hear that the difficulty of breathing was constant, or that the tonsils were greatly enlarged. In none, although it might be supposed the eruption of matter caused death, could I ever discover that any the least had been evacuated. In two cases, the history of which was related to me, the symptoms were those described above; comparative absence from all complaint, and sudden suffocation.

One man was walking on the floor affected, as was supposed, with slight soreness of throat, and suddenly rushed down, dying immediately, as if killed by strangulation. The other died as instantly, talking to those about him immediately before being seized with death, and no assistance could be procured. In neither of these cases did an examination, I believe, take place after death; but the minute history of the symptoms was confirmatory enough of the nature of the malady.

Fortunately, cases of the above description are extremely rare; and singular enough it is that the affection of the uvula above related should be as rare as they are. I have not in a very extensive practice seen more than three cases, and in all was fortunate in discovering the nature of the disease, and applying the remedy. It is the rarity of the complaint that has probably led to its not being particularly adverted to by writers, coupled with the symptoms which characterize it, being those which obtain more or less in affections of the larynx. But from disease of this organ this species of elongation may be readily distinguished. In all the affections to which the larynx is exposed, there is more or less difficulty of respiration, and cough accompanied with hoarseness of voice: in the disease under consideration these are not constant but only occasional. An accurate investigation of the pharynx, &c., however, is the only true and certain method by which we can gain a perfect idea of the nature of the attack. In no affection of the throat should the uvula be left without strict examination. In a case which I shall append, I had very nearly lost a

valuable man by not minutely examining the uvula. I am in the common habit of drawing it forward with the end of a spoon, but in this instance omitted doing so, supposing I saw distinctly enough the extremities of the uvula. It is this liability to deception which makes it necessary to be more particular than to trust to ocular demonstration merely. The part must be drawn forward, and not the apparent extremity trusted to. In a case lately, I was enabled to detect an elongation which, as the inflammation was accompanied by tumefaction of both tonsils, I might have been led to overlook, had I not been aware of the difficulty of judging with accuracy without drawing forth the uvula which had appended to it an extension of membrane more than an inch long.

The inaccurate mode of expression used by writers generally, or, rather their want of accuracy as respects the cases of death, caused, as they give one to suppose, from matter exciting suffocation by entering the windpipe, induced me first to doubt the validity of what was advanced, and made me question whether ever death took place from this cause, and observation has strengthened me in the opinion, that elongated uvula is more frequently the cause of death, and more particularly when it occurs in apparently mild cases of angina. With respect to the treatment when it is discovered that the uvula is elongated in angina, this is the most simple A mere incision with a lancet is sufficient in slight cases, and in the worst the scissors, so as to remove the whole, is all that is required. The fluid is so thin, that a small opening

will be sufficient where the affection is detected before the membrane has become very much elongated. The membrane collapses as soon as the fluid is evacuated, making it not necessary to remove it in common cases. In the one from which the drawing is taken, its size required the whole to be snipped off. It will be at once evident that there is not in the whole range of disease an affection more dangerous than the one I have endeavoured in this hasty sketch to describe, nor one so calculated to endanger the reputation of the medical practitioner. The mildness of attack, the doubtful diagnosis, the confident prognosis as to the event, combine to stamp the disease as one of greater uncertainty and danger than most affections of the throat, but which becomes simple both in its consequences and event, if early discovered, by accurate examination, and which alone is required. That it has been a frequent cause of death, there can be no question, and that it has been mistaken for other affections of the respiratory organs, I have as little doubt. The history of the affection is very obscure, and the deaths that have taken place from many supposed diseases of these organs, may have had their origin in this singular condition of the uvula. However this may have been, it is one deserving attention, and I do hope I have not unnecessarily taken up the time of the Society, by drawing attention to an affection so calculated to deceive and to lead to such uncertain conclusions. The accompanying drawing gives an accurate view of the appearance of the uvula so affected, which occurred in a person whom I

attended, and who was with difficulty saved from a sudden death.

Case I.—On the morning of the 24th November, 1834, I was requested to visit Mr. M. of the Ham. He had been complaining of soreness in the throat during the night, which had rapidly got worse, and was accompanied occasionally with a slight feeling of suffocation, but this was quickly relieved by drinking water. He told me that he was subject to inflammation of the throat. On examining (I must acknowledge but imperfectly,) the fauces, they were found inflamed, and the tonsils slightly swelled; the uvula was broader and apparently longer than natural, and highly injected. I thought I discovered its termination. He was directed a blister to the neck, and a gargle to be frequently used along with a purgative medicine, and told he would soon recover. I had not left the house half an hour before I was again hastily summoned, he having been attacked with such difficulty of respiration, and symptoms of suffocation, as to alarm the house. On arriving I found him as pale as a corpse, but then perfectly relieved in his breathing. He described his sensations during the paroxysm to have been most appalling, and that he was only saved from instant death by his wife beating him on the back, which excited cough, by which he was relieved immediately. Having seen a case somewhat similar, I was at once satisfied of the nature of the affection, and immediately blamed myself for not having more particularly examined the uvula. By pressing down the tongue I could see the commencement of the appendage, and on desiring him

to cough, it was raised up, and brought forward by the spoon. The extended membrane reached to the front teeth, which enabled me to seize it and cut it off with a lancet. He was instantly relieved and suffered no more. The capsule containing the fluid which escaped into the mouth on the lancet being used, was formed of an extension of the mucous coat, extremely thin, and very diaphanous.

Case II.—On the 8th of this month I was called to visit Mrs. E., who was affected with sore throat and occasional hoarseness, which she said was like the croup. On examining, redness of the fauces, and particularly of the palatine arch and uvula, was discovered. Although I saw the fleshy termination of the uvula, I was satisfied from the description that effusion had taken place, and produced the symptoms of occasional croup-like breathing. On bringing forward the uvula, the fluid infiltration was discovered, more than an inch in length, which I immediately opened through its length with a lancet, and evacuated the contents, giving immediate relief. Nothing more was required, and she is now perfectly well.

In both these cases a fatal termination would have taken place had I been ignorant of the nature of the complaint, and trusted to the usual treatment by bleeding, &c., without satisfying myself of the condition of the uvula. In the first a somewhat hasty examination had nearly lost a valuable life; for had the paroxysm occurred in the night, or had he not been capable of great exertion, death would have certainly taken place.

Whitehaven, July 16, 1838.

ARTICLE VI.

A

REPORT ON MIDWIFERY

IN PRIVATE PRACTICE,

WITH OBSERVATIONS ON THE USE OF ERGOT, &c.

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HAVING during the period of my practice regularly registered all the cases of midwifery I have attended, and inserted memoranda of every circumstance deserving of particular notice occurring in them, I have thought that, in this age of statistical enquiry, a brief yet faithful report of six hundred obstetric cases in *private* practice, would at least be interesting to the members of the Association, and might afford useful if not necessary elements in the calculation of the value of female life in the married state. The statistical reports in reference to the subject of this communication, have up to the present time been chiefly furnished from the records of obstetric institutions,—a source affording information respecting one class of the population of the

country only, and consequently contributing very imperfect and unsatisfactory data for the purpose of life assurance: I venture, therefore, to call the attention of the members of our Association, and of my medical brethren generally, to the usefulness, I may say value, of records of obstetric cases in *private* practice, occurring in metropolitan, rural, and manufacturing districts, as affording, for obvious reasons, the only satisfactory materials for estimating the value of female life, and in conjunction with the reports of *public* practice already available, as giving us the means of ascertaining the true statistics of parturition. To facilitate comparison with similar documents, I shall arrange my cases in accordance with the methods usually adopted in public institutions, and afterwards offer such observations as the nature of the cases or circumstances which may have arisen during their progress, necessarily call forth, and which may be worthy of the attention of the *junior* members of the profession, being, nevertheless, conscious that I have nothing of novelty to offer, or meriting the notice of my contemporaries and seniors.

The six hundred mothers gave birth to six hundred and ten children, of which three hundred and sixteen were boys, and two hundred and ninety-four girls; ten cases of twins having occurred. There were five hundred and eighty-two presentations of the head, and *eighteen* preternatural presentations. Of the latter, *six* presented with one or both feet, *three* of the children were born alive, and *three* still-born; of the latter, two were premature births, and the third died in consequence of its head being

detained in its birth. *One* presented with both knees; the child lived. *Nine* presented with the breech, *six* were born alive, and *three* still-born. *One* presented with its arm, and was born dead, and *one* presented with its elbow, also born dead.

Of the *natural* cases, *ten* presented with the face to the pubis of the mother, two of which required the application of the forceps. *One* was a presentation of the face, with the chin towards the pubis; no difficulty was experienced. In *two*, a hand came down with the head; one was a premature birth at eight months; in neither was it an impediment to the birth. In *twelve* cases, the forceps were employed. In *two*, the perforator. In *ten*, ergot was administered. In *two*, prolapsus of the funis occurred; in the first case, the funis had occupied the pelvis with the head of the child, before I arrived, and consequently the child fell a sacrifice. In the second case, it took place in a premature birth; child dead. In *two* cases, *convulsions* surpervened; and in *two* the premonitory symptoms of this alarming complication appeared. In *twenty* cases, *hæmorrhage* occurred to a degree requiring the employment of measures to suppress it; they were, eighteen *accidental*, and two *unavoidable*.

Ten cases of *twins* occurred, affording the following presentations and mortality:—The *first*, girls, premature at the fifth month. *Second*, boys, at the full period, one still-born. *Third*, girls; first child, head presented; second, feet; both alive. *Fourth*, girls; first child, head presented; second, breech; both alive. *Fifth*, boys; first child, head presented; dead and putrid; second, feet; the child

lived ten hours. *Sixth,** girls; first child born before I arrived; second, head presented; both alive. *Seventh,* girls; both presented naturally, and born alive. *Eighth,* boys; first child, head presented; second, breech; both alive. *Ninth,* boys; presentations not recorded. *Tenth,* boy and girl; the first child was born during the attendance of the midwife, who immediately removed the placenta without exploring the abdomen, and who had returned to a patient whom she had left fast progressing in labour, to attend the present case; within half an hour, another child was expelled, *enveloped* in its membranes, with the placenta attached. The membranes had burst, and the liquor amnii escaped, but the ovum was so little disarranged, that it would have made an admirable preparation for a lecture-room. The funis was seen to closely entwine the trunk of the child twice. The mother suffered no more hæmorrhage than at a common labour.

Four mothers *died, one* after experiencing a tedious first labour of twenty-four hours, the membranes having burst at its commencement, puerperal fever supervened on the second day, and terminated her existence on the sixth; *one* after a labour complicated with convulsions; *another* after an elbow presentation, a victim to her violence of temper and obstinacy; and the *fourth* death occurred after a natural labour, of short duration; the patient having suffered an attack of influenza in January, 1837, at that time epidemic, premature labour at the eighth

* The mother of the above had *twins* in four successive births; first, a boy and girl; second, two girls; third, boy and girl; and fourth, boy and girl.

month took place; the process was too much for her shattered powers, her constitution having experienced great injury from disease of the kidney, which had kept up an almost continual secretion of *albuminous* urine during twenty years. The patient sunk on the third day.

There were thirty-four *still-born* children; of these, *fifteen* were premature births, i.e., *two* were premature twins at the fifth month, *one* at the sixth month, *five* at about the seventh month, and *seven* at the eighth. *Nineteen* were born at the full period of utero-gestation: in *eleven* of these cases, the cause of the death was unknown; in *two* the perforator was used, *two* followed presentations of the upper extremities, *one* in the case of placenta *prævia*, *one* from detention of the head in a presentation of the feet, *one* in a breech presentation (midwife's case), with the scrotum and penis sphacelated, and *one* born before I arrived, enveloped in its membranes. *Seventeen premature* children were born alive; of which, *two* were at about the sixth month; one child lived thirty-one hours, the other fifty hours; *nine* children were born at about the seventh month, and *six* at about the eighth. One of the *seventh-month* children lived six months, and then died, apparently from too early weaning. Another has nearly completed his third year; the remaining seven died at varying periods before the third week. Of the *eighth-month* children, one has arrived at the age of fifteen years; another reached its eighth month only; the others survived their birth but a few days.

Observations.—The determination of the *mean duration of labour* is a most difficult problem; and

it is only within the walls of an obstetric institution that we can arrive at even an approximation to the truth. In private practice, it is obvious that the attempt would be fruitless. I have invariably noted the time that I have been *detained* at each case, but such a record will avail us little in determining the point in question. I find that in the six hundred cases, at *eighteen* I was in attendance more than twenty-four hours; and in *twenty-two*, the children were born before I could reach the bedside of the patients, although resident in the same town with myself.

Lingering labour has for the most part occurred with the first child, and in consequence of the early rupture of the membranes—a rigid os uteri, or inert uterine action. We are advised by high authority to endeavour to abridge the process of labour, by expediting its first stage with digital manipulation, not suffering it to extend beyond "twelve or fourteen hours, whenever the uterine contractions continue to be regular and progressive."* I approach the subject of the management of the first stage of natural labour, with a just estimation of my own comparative inexperience, and with feelings of high respect for the distinguished individual who inculcates the practice of *aiding* the dilatation of the os uteri; but believing the advice to be pregnant with mischief, if not positively dangerous, and having found that unfavourable consequences are to be

* This point has been mooted, and in part tested, by Dr. Fleetwood Churchill, of Dublin: the result confirmed Dr. Collins's opinion, which is adverse to Dr. Hamilton's practice.—See Report of the Western Lying-in Hospital, Dublin, in the *Medico-Chirurgical Review*, April, 1838, and *Dublin Journal of Medical Science*, vol. xiii., pages 239-241.

attributed less to the *duration* of the first stage of labour, than to the *means* by which the dilatation is effected, I think it my duty to raise my humble voice in reprehension of the practice. Who is there amongst us that has not witnessed the ill consequences of officious meddling in the parturient process, manifested by the heat, dryness, and swelling of the vagina and os externum? In and *with* the doctor's *hands,* I grant, that such results would not be met with; but can we calculate upon such an immunity where the anxious and inexperienced youth has the managing hand? Do we not always desire that the opening of the mouth of the womb, should be effected by the soft membranes distended by and protruded with the waters, rather than by the hard and cumbrous head? And why is it our desire? because experience has taught us, that when the membranes burst early, the labour is almost invariably more painful and tedious, aud that *painful* interference may induce unmanageable effects. Here let me state a fact bearing strongly on this question; it is this, that in three severe cases out of four of hysteritis in my practice, the membranes had ruptured at the commencement of labour, and consequently the os uteri had been dilated by the head of the child. I may mention in this place also, that the only case of puerperal peritonitis that occurred among my patients, was preceded by the like untoward circumstance. These cases have contributed greatly to impress me with the belief in the pernicious tendency of the practice of manual dilatation.

In the eighteen cases of lingering labour, where I

was detained more than twenty-four hours, six of them were terminated by the natural powers; one case in particular was an excellent instance of the value of patience; the membranes ruptured at the very commencement of labour, the os uteri was fifteen hours dilating, the head was stationary within the pelvis for twelve hours, but the os externum so unyielding that I did not consider it prudent to apply the forceps; the uterine action was fluctuating and inefficient. Having administered an enema, I gave an opiate, and after the patient had enjoyed a little rest, the pains returned effectively, and soon completed the business. I am persuaded that if I had employed the like patience in other cases, the forceps need not have been so frequently used. Of the twelve cases remaining, in eleven either the forceps or ergot was used; and in one, a labour of thirty-seven hours' duration, the child presenting with its face to the pubis, the forceps were applied ineffectually, and it was found necessary to terminate the labour by using the perforator.

The ergot was used in ten cases, and, upon the whole, advantageously; in four instances it failed of its purpose; in two of the four it was given in the form of infusion, and I am inclined to think the drug was old and inert; in the other two, I am disposed to believe that, from an idiosyncracy in the patient, the ergot did not exert its specific influence. The substance in powder is the most certain form; of late, however, I have used Bass's Essence with very good effect; indeed, I prefer it to the substance, as it sits easier on the stomach. The time required to accomplish its purpose, in those cases

in which it was effective, has been from half an hour to an hour and a half. I have seen *no* ill results from its use, when employed appropriately.

In the fourth volume of our *Transactions* there is a paper by Mr. Chavasse, of Birmingham, the object of which is to show that ergot "is calculated, when given without care and discrimination, not only to defeat the purpose for which it was administered, but to destroy the vitality of the child in utero; and that, at other times, even when given under the guidance of judgment and discretion, it will occasion hour-glass contraction and retention of the placenta." I am induced to make some remarks upon the above asseverations of our associate, from not having witnessed any similar untoward consequences after its employment; I purpose also endeavouring to elucidate its fatal operation, with the hope of averting such baneful effects in future.

Mr. Chavasse has given the details of two cases in which the ergot was administered, and the mothers gave birth to still-born children, although in both it was remarked that the child was lively a short time previously to the drug being given. Mr. C. states also, that the same fatal effects have occurred in the practice of others; and from what he has stated in addition to his own experience and that of his medical friends, there is reason to fear that a considerable increase in the number of still-born children has taken place, in consequence of the introduction of this potent drug into the practice of midwifery. Admitting the fact, there are but two ways of explaining the *modus operandi* of this destructive agent: either the ergot possesses

some intrinsic deleterious property, acting as a poison upon the child in utero, or it has been employed prematurely or inappropriately, and has effected a physical injury upon the child in its passage through the pelvis, causing its death. If the former mode of action were the case, we ought more frequently to witness its ill effects; indeed, where large doses are given, and they frequently are, no child could escape. I will endeavour, then, to show that the latter is the case, and, also, that the result is the natural consequence of the peculiar property of the agent.

Let us first consider the peculiar action of ergot on the uterus, and compare it with the natural action of that organ during its expulsive efforts in parturition. The action of the womb after taking ergot, is almost continuous and unremitting, whilst uninfluenced by the drug it is action and repose alternating, affording time for the fœtal head to accommodate itself, by the gradual approximation of its bones, to the form of the passage through which it is propelled, and thus diffusing the pressure *slowly* and *generally* through the brain. Mark the contrast: in the former case, the fœtal head is subject to a persisting force, instead of an alternating one, and driven like a missile, though with less velocity, through the unyielding pelvis, instead of advancing step by step, from the natural throes of labour; consequently, the brain is exposed to a degree of pressure incompatible with life. Does not this explain the cause of still-birth, said so frequently to have occurred after the administration of ergot? And can we be surprised at the result, when it is administered at an *early* period of labour.

The successful practice of the obstetric art, mainly consists in retaining nature as our guide, and imitating her mode of action, if called upon to aid her, when the natural powers are unequal to their task; it appears, then, that as in the use of the ergot we are not imitating the throes of labour, we ought not to employ it till the hazard of long-continued pressure is passed by—in short, until the os uteri is fully dilated, and the head of the child occupies the *cavity* of the pelvis. Upon recurring to Mr. Chavasse's two detailed cases, it will be observed that he has not noticed the degree of advance of the children's heads; he merely states the os uteri to be dilated to "about the size of a crown piece;" it is, therefore, probable that the fœtal head had not made much progress *into* the pelvis, so that, if suddenly and rapidly propelled, undue pressure must ensue, and the sequence I have endeavoured to account for, inevitably follow. In my own practice I have almost invariably employed the ergot as a mild substitute for the short forceps, and have administered it accordingly. I will give a case or two in illustration:—Mrs. B., thirty-two years of age, first pregnancy, membranes burst on a Saturday evening, trifling and irregular pains came on during that night and Sunday, in the evening pains more severe ensued at irregular intervals. I gave an anodyne. Monday morning I examined and found the os uteri but little opened, and the head presenting; at night the os uteri was not larger than a shilling. I gave an anodyne. Tuesday morning, os uteri the same. I bled her to sixteen ounces. In the evening, pains more regular, os uteri as large as a half-crown. I adminis-

tered a domestic enema. Wednesday, two o'clock A.M., os uteri fully dilated, and head entering the pelvis, pains inefficient, external parts still very rigid. I fomented them with warm water, and lubricated them internally with an abundance of lard. At eight o'clock A.M., an ear could be felt under the pubis, and as the pains were declining, I gave half a drachm of ergot infused in two ounces of boiling water, repeating the dose every quarter of an hour; after the second dose, the action of the uterus was aroused, the third dose increased effectively the pains, and a living child was born in two hours; the placenta was expelled soon after.

I shall not detain the reader with the details of the second case; it will suffice to state, that the patient was forty-two years of age, her first child, the membranes ruptured early. At the expiration of forty-eight hours the os uteri was fully dilated, languid uterine action throughout, presentation natural, and the head was advanced *into* the pelvis. Considering the pains inefficient, I gave two half-drachm doses of ergot in powder, and the child was expelled in half an hour. Both mothers and children did remarkably well.

It may be asked, if the use of the ergot in natural and uncomplicated labour is to be restricted to the stage of the process, as herein advised and exemplified, what has midwifery gained by the introduction of it as a parturient agent? I reply, much, if it were only that it spared even the stoical and patient sufferer the irresistable apprehensions of an instrumental delivery, not to mention the terrors excited in the timid and nervous, if anticipating the employ-

ment of instruments within their persons. Nor is it a trifling gain in the hands of an unskilful operator with the forceps. If the occasional failure of this agent be urged as an objection to its employment, and it will sometimes be found inert, I beg to state that when used appropriately in natural labour, you will not find yourself in a worse situation for the application of the forceps; I speak from experience. I invariably carry the ergot with me to labours, that I may be prepared against after hæmorrhage; but I never suffer myself to use it with the view to *economize time*, a rule of practice with many, and, I fear, a frequent source of its intemperate and pernicious employment.

I have made enquiries among my professional neighbours, and do not learn that they have witnessed the fatal consequences recorded by Mr. Chavasse and others. I have dwelt long on this subject, because I think the communication of Mr. Chavasse calculated to bring into disrepute (yet highly desirable from exciting discussion,) an agent which, when time and experience shall have sobered the profession in its use, will remain an invaluable adjuvant in obstetric practice.

Of the *preternatural labours*, three require particular mention. The first is a case to which I was called by the midwife in attendance; on examination, I found that it was a breech presentation, with the belly of the child towards the pubis of the mother; the trunk of the child was so impacted in the pelvis, and the lower extremities so closely approximated to each other and to the child's abdomen, that both penis and scrotum were *com-*

pletely incarcerated, and had been permitted to remain in that state so long a time, that they were both livid, and their cuticle separating. I was under the necessity of using the blunt hook to bring forward the trunk sufficiently for the liberation of the extremities, after which a child, recently dead, was very soon brought into the world.

The second case is one of presentation of the elbow, the same midwife being in attendance; the membranes had ruptured at nine o'clock the previous evening, and, unfortunately, the nature of the presentation was not discovered till three o'clock the following morning, when I was sent for; on my arrival, I found the uterine action exceedingly powerful, and I immediately employed the usual means to restrain it, previously to taking the necessary steps to change the position of the child; with considerable difficulty I brought down a foot so as to place a fillet above it, but by no prudent force or manœuvre could I effect turning. I called in a professional friend, who made an attempt to turn the child, with no better success than myself; the woman began at this time to be very refractory, *and would not permit us to do anything for several hours,* during which time the throes of labour continued tumultuous; becoming now exceedingly anxious regarding her safety, I redoubled my entreaties that she would permit me to make a farther effort to deliver her. About one o'clock P.M. she assented; I then passed my hand into the uterus, and experiencing no resistance, (a fearful omen,) I readily found the other foot and brought it down, the trunk followed, the arm receded, and in the usual manner the child, which

had evidently been dead some hours, was taken from her; I need hardly say the case terminated fatally, she died the following day. About seven years previously I had delivered this woman in an arm presentation, having fortunately been summoned immediately upon the bursting of the membranes.

The third case is a breech presentation, complicated with hydrocephalus, the fœtal head having acquired a magnitude of rare occurrence; the following is a brief narrative of the case:—In 1835, I was requested by the wife of a mechanic, pregnant with her third child, to attend her when my services might be required. In both her previous labours she had been attended by the midwife of the place, but feeling persuaded, from her rotund and unwieldy state, that she was pregnant with twins, she was desirous of securing my assistance. I was called to her one evening in consequence of the rupture of the membranes; she had experienced some pains during the day; upon examination, I found the os uteri considerably open, and the breech of a child presenting; the pains were regular, but the throes not urgent; in an hour the hips had cleared the os externum. I brought down the arms, and proceeded to advance the birth of the head, but found it impossible to make it enter the brim of the pelvis; I was the more surprised at this, in consequence of the child being remarkably small and attenuated. After the arms were brought down, the child had moved, but the funis soon ceased to pulsate, and as there was evidently no chance of saving its life, I determined on waiting a time, to see what uterine action would do towards the advance of the head.

In a short time there was a *complete suspension* of the action of the uterus, and having ascertained that the base of the fœtal head was greatly extended, that no progress had been made, and also that the uterus remained as much enlarged as if containing another child, I requested the assistance of a medical friend, at the same time I went home for my perforator, feeling assured that it would be required to reduce the volume of the head; yet I still laboured under the impression that there was another child in the uterus, not conceiving that the *whole bulk* of the uterine tumour was made up of a hydrocephalic head; my friend proceeded to examine into the state of things, and desirous of making an attempt to release the head, but without sufficiently considering the difference in the tenacity of living and dead animal textures, he separated the trunk at the neck, leaving the head in the uterus. What, in most cases, must be considered an untoward circumstance, in this particular instance, much facilitated ulterior proceedings. I now passed my left hand into the uterus, and found it solely occupied by an enormously distended head; grasping and steadying it, I punctured it, and evacuated the fluid; with my hand I compressed and emptied the head; it now readily folded like macerated leather, and was, without difficulty, brought away. On the second day after delivery, the woman complaining of pain in the region of the uterus, with considerable tenderness, I bled, purged, and gave her a few doses of calomel and opium, which removed all unpleasant symptoms. Anxious to ascertain the quantity of fluid contained in the head, I took it home with me,

and as there was but a small puncture, I had no difficulty in determining that point with accuracy; I found that it required nine and a half wine pints* of water to fill the cranium, and allowing for a small quantity of the cerebral substance that might have escaped with the fluid, I think that I may safely state that the fœtal head contained an imperial gallon. The cranium measured in circumference *two feet two inches;* from ear to ear, over the larger fontanel, *nineteen inches;* from the root of the nose to the occiput, *two feet*; and the parietal bones were *four inches and a half* apart at the sagittal suture.

Two cases exhibiting the premonitory symptoms of *convulsions* occurred. In both instances the unpleasant symptoms were completely removed by one large bleeding; they were first pregnancies. In four instances within the last seven years I have been called in to attend where convulsions were established. The first case, a first child, and the mother a short leucophlegmatic subject; the midwife had been in attendance some hours; soon after the accession of the convulsions I was sent for; on my arrival, I bled the patient to between thirty and forty ounces; the fits still recurring, I requested the presence of a professional neighbour, and as the os uteri was largely open, and the head of the child presenting, we gave the ergot, in consequence of its having been successfully used in a case to which my friend had been recently called. In this in-

* Dr. Mason Good, in his *Study of Medicine,* refers to cases of hydrocephalus, in which, "on opening the head, twelve or fifteen pints of fluid have often been evacuated, and occasionally not less than twenty-four or twenty-five pints;" but he does not state whether these were congenital or not.

stance it failed of its purpose, no efficient action being excited after two full doses had been given; the convulsions returned with shorter intervals, and as the patient became insensible to what was passing, and the head was still above the brim of the pelvis, we determined on *version;* but here again we were foiled, the ergot having excited the womb sufficiently to make it embrace the child so closely and persistently, as to entirely prevent our bringing down the feet; we therefore perforated the head, and extracted the child. To give in detail the after treatment, would but extend this report uselessly; let it suffice, then, to state, that uterine phlebitis arose, from which the poor woman died on the eighteenth day. I present this case, not as a specimen of judicious and creditable practice, but as a beacon to guard young practitioners against committing similar errors. I consider we erred in giving the ergot, and having done so with no good result, we erred a second time in not perforating at once, instead of making the attempt at turning; I fear the phlebitis was the consequence of the latter. Although a painful reflection, I cannot but acknowledge that this case is intituled to insertion in the gloomy pages of the *Black Book,* suggested by Mr. Crosse in his elaborate address delivered at Manchester;* and I trust it would prove a *useful* contribution.

In the second case, I was called in by another midwife upon the accession of convulsions, at three o'clock A.M., July, 1837; the patient residing near

* *Transactions of Provincial Medical and Surgical Association,* vol. v., pages 85 and 86.

to my own house. I immediately bled her to twenty ounces; she was greatly relieved, and after remaining an hour without witnessing a return of the fit, I returned home. At eight A.M. I was hastily summoned to her again, in consequence of her experiencing a violent paroxysm. On my arrival she was insensible; I took sixteen ounces more blood from her arm, and then examined into the state of the labour. Finding the head of the child occupying the pelvis, and an ear just within reach, I determined on immediate delivery. Another violent convulsion occurred, I therefore, without further delay, applied the forceps (which, by the by, was not an easy matter, from her incessant jactitation), and soon delivered her of a fine living boy. She remained very lethargic for some hours, but had no return of the paroxysms, and recovered speedily.

To a third case I was summoned, a few months since, into the country, by a third midwife. I arrived at the patient's house about nine o'clock P.M., and learnt that convulsions came on very early in the labour, that she had been delivered of twins in the middle of the day, and that the fits continued afterwards. I found her in a state of coma, with stertorous breathing, pulse rather full and accelerated, pupils contracted. I opened a vein in her arm, but finding the pulse sink considerably on the abstraction of about eight ounces of blood, I desisted, and applied mustard cataplasms to her legs, and made preparations for administering an enema: nothing could be given by the mouth. Before the enema could be prepared, she was

evidently sinking fast, and soon ceased to breathe. There is little doubt that the bleeding hastened the fatal result; but as we had no measure of the degree of mischief inflicted on the brain, I cannot, on reflection, chide myself for the measures practised. This was also a primaparous patient.

One other case I have to notice. The friend who assisted me in the first case I have related requested my advice a few years since at a labour accompanied with convulsions; it was the patient's second labour. I found that the paroxysms were frequent, and in the intervals she could with difficulty be aroused to give a reply to any interrogation. My friend had refrained from bloodletting, in consequence of the great œdema of her lower extremities. On my own part, seeing no contraindication in an effect from a mechanical cause, I urged immediate venesection, and thirty ounces of blood were taken away. As her state was not materially improved by it, and finding on examination the lower extremity of a child in the vagina, we proceeded to delivery, which was soon accomplished. Upon the birth of the child, we ascertained there was a second. The woman was perfectly unconscious of what was going on; as the uterine action was profitable, and the presentation natural, we left the birth of the second child to nature, which she soon effected. The placentæ were readily yet not precipitately removed, and we were congratulating ourselves on having thus far proceeded safely, when a terrific paroxysm arose, and continued some seconds. Having protected the brain by the early detraction of blood, I advised fifty drops of Batley's Sedative

Solution ;* it was presently given ; mustard cataplasms were also applied to the feet. The patient soon settled into a quiet sleep, had no return of the convulsions, and, in short, did remarkably well. This is the extent of my experience in puerperal convulsions. I have met with no case in my private practice, in which a paroxysm was established, and it seems that they are of rare occurrence, for two of the midwives above mentioned, each having practised at least thirty years, assured me they had never seen the like before ; and surely if they had ever seen a case, they never could have forgotten it. Dr. Collins met with one case in five hundred and fifty-five labours, during the seven years of his mastership of the Dublin Lying-in Hospital.

In the six hundred cases reported, *twenty* were complicated with hæmorrhage ; of these, in *nine* the hæmorrhage occurred after the placenta was expelled, in *four* in the third stage of labour, and in *seven* before the birth of the child, of which two were *unavoidable* and five *accidental.* I shall merely

* It appears that the propriety of giving opium in puerperal convulsions, still remains debateable ground. Dr. Davis (*Obstetric Medicine*, page 1028) "feels disposed to recommend the exhibition of a full dose of opium *after* ample bleeding." Dr. John Ramsbotham (*Observations in Midwifery*, part ii., page 27) writes, "The exhibition of opiates or of stimulants in these alarming cases is justly exploded. But after free evacuations, the injection of an enema, composed of a proper quantity of opiate, with a solution of asafœtida, or oil of turpentine, has in some cases seemed to me to be beneficial." Dr. Collins, of Dublin, says, "Ample experience, however, has convinced me, that it is not only harmless, but *highly beneficial*, in those cases where the fits *continue after delivery ;* and I should hope the cases adduced will prove satisfactorily, that it is also useful under many other circumstances, where proper steps had been previously taken." He also quotes the *adverse* opinions of several of our best writers on midwifery.

observe on the thirteen cases comprising the first two classes of hæmorrhages, that the usual means for its suppression were employed with success; in two of these cases the placenta adhered partially, requiring the introduction of the hand to effect its separation; there was also a case of disruption, in which the hæmorrhage was excessive, requiring brandy in liberal doses; I also administered the ergot with decidedly good effect; indeed, latterly, I have invariably given the ergot in hæmorrhages occurring in the third stage of labour, but I prefer removing the placenta previously to administering it.

I embrace the opportunity offered here of addressing a few words to young practitioners on the employment of *cold*, for I am persuaded that the application of it is sometimes persisted in to the prejudice of the patient. Dr. Blundell in his lectures* says, "When a woman has lost so much blood, that she is, in every part of her body, cold already, which in dangerous bleedings, is no uncommon occurrence; the application of cold, though in conformity to popular prejudice, it may be recommended, is, I fear, of small advantage;" and Dr. Davis writes,† "Care should indeed be taken that an exhausted subject should not be supplied with an excessive quantity of any cold fluid at a time, nor be too long exposed to the action of an intense cold in any form."

In cases where an excessive and rapid escape of blood has produced a sudden and fearful depression of vital power, the use of diffusible stimuli must

* *Lancet*, vol. xiii., page 611.

† *Obstetric Medicine*, vol. ii., page 1056.

not be deferred. In two cases of twin-birth, in which *large quantities of blood were lost in little time,* the application of cold locally with the above precaution, immediately followed up by the administration of Bass's Essence of Ergot, brandy, and ten-drop doses of laudanum, the latter stimulants repeated every quarter or half an hour, and persisted in for four hours, were followed by the happiest results.

Of the six cases occurring previously to the birth of the child, *three* only require particular mention; the first, a *placenta prævia,* the patient experienced a slight hæmorrhage about the completion of the seventh month; it recurred at the end of six weeks to a considerable extent; by cold applications and the recumbent posture it was repressed, but it returned in a week. On an examination I ascertained that the placenta was centrally fixed over the os uteri. Finding the latter sufficiently open, I pierced the placenta with my fingers, and carrying my hand onward, I readily seized the feet of the child, brought them down, and completed the delivery. No untoward symptom followed, and the woman did remarkably well. Occasionally the expulsion of the placenta *precedes* that of the child. A few years since I was requested by a professional neighbour to join him at a case of hæmorrhage. A midwife had had the early management of the case. On my arrival, the head of the child had pushed the placenta into the vagina; a portion of it was protruding from the os externum, by the side of the head, and with a few pains they were expelled together; the hæmorrhage had not been at all alarming. The same midwife assured me she had

met with a similar instance, and unattended with any ill consequences.*

* Dr. Collins mentions two cases; one occurred to himself, the other to Dr. Clarke; the latter died. See *Practical Treatise*, &c., page 91. Dr. Ramsbotham, in his *Observations in Midwifery*, part ii., pages 229, 236, relates six similar cases, without a fatal result. My friend Mr. Bailey, of Thetford, has also recorded, in the *London Medical Repository*, vol. xvi., "A Case of Labour in which the Placenta was expelled before the Child." And on the day preceding the reading of this paper at Colchester in June, 1838, he met with a second case of the kind, which I take leave to relate in his own words:—"Mrs. Holmes, the wife of a labourer, aged thirty-three years, was taken with violent uterine pains on Monday, the 11th of June, at one o'clock in the morning. Having two months to go before her full time was expected, she did not suppose herself in labour; the pains becoming more frequent, she sent for her neighbour. At four o'clock she experienced a most dreadful labour pain, which was immediately followed by a profuse hæmorrhage, when instantly all pain ceased. I was sent for, and arrived between five and six o'clock: I found her in a state of frightful syncope, and as it were deluged in hæmorrhage, the pulse scarcely to be felt, the countenance of a death-like appearance, and attended with great restlessness. Having roused her by stimulants, both externally and internally, I proceeded to ascertain the cause of her state, and found the vagina filled completely with the placenta; and carrying my finger to the os uteri, it was discovered to be firmly contracted upon the funis. This circumstance may be considered a wise provision of nature to stop the hæmorrhage. There were no pains, but the powers of life appeared to be fast sinking, so that no time was to be lost in effecting delivery, to save both mother and child. I endeavoured to dilate the os uteri by insinuating my fingers by the side of the funis, and by perseverance I effected the introduction of my hand, turned the child, and delivered as quickly as I was justified under such trying and alarming circumstances, taking care to support my patient by occasional stimulants, and encouraging her as to the termination. This process occupied full forty minutes, the hæmorrhage was trifling during the time, and she bore the operation beyond expectation. I found her correct as to her reckoning; it was a seven-months' fœtus, denuded of cuticle, and partially decomposed; the funis remarkably small and white. By assisting the contraction of the uterus by moderate pressure with the hand, the hæmorrhage ceased, and my patient in a short time recovered from the collapse."—In Mr. Bailey's first case, the hæmorrhage was excessive, delivery was effected by turning, and the lives of mother and child saved.

In the *two* remaining cases requiring notice, which were of *accidental hæmorrhage*, the extent of flooding demanded the rupture of the membranes. On the evacuation of the liquor amnii, the discharge of blood ceased, and the termination of both the labours was left to the natural powers. No death has occurred among my cases of flooding.

There occurred in my practice two instances of a deviation from the normal state of the *children.* The first, a case of hepatocele, occupying the funis, detailed in the *London Medical Repository.** The second exhibited a *complete agglutination* of the fingers of one hand, so that they formed a cone; the thumb was also tied down by a slender cord of lymph, which I severed, and thus liberated the member, and enabled it to become useful.

I have now completed the task imposed upon me, by my desire, to contribute something towards a general stock of information, that may hereafter be rendered available for useful, nay, I will venture to predict, important purposes, and I trust that others, in a more extensive field of observation, will take the hint, and follow in my wake, (for I have troubled the Association with this paper more as an incentive than for the extent of practical lessons it can contain,) either by furnishing reports of their *private* midwifery practice, or by supplying monographs of their *private* experience in natural, preternatural, laborious, or complicated labours, &c., as without such materials the necessary *data* will still remain *desiderata,* and the labours of statistical enquirers into these matters, prove comparatively useless.

* Vol. x, page 357.

The following is a tabular view of the cases herein recorded, to facilitate comparison with other reports. Under the head of still-born are included fifteen premature births.

600 cases.		Sex.		Twins.	Preternat. present.			Face.	Funis.	Hæmorrh.		Convulsions	Still-born.
Nat.	Pret.	Boys.	Girls.		Feet or knees.	Breech.	Arm or elbow.			Unav.	Accid		
582	18	316	294	10	7	9	2	1	2	2	18	2, and 2 with prem. sym.	34

I am enabled, through the kindness of my friend Mr. Bailey, who, at my request, has furnished me with a statistical account of his midwifery practice in Thetford and its vicinity during twenty-seven years, to lay before the Association the following table, which gives a summary view of it; and I regret exceedingly that I could not prevail on him to present a full report of his very extensive experience and successful practice, as, from the well-known talents of our associate, much highly interesting and instructive practical information would have been elicited.

2819 cases.		Sex.		Twins.	Preternat. present.			Face.	Funis.	Hæmorrh.		Convulsions	Still-born at the full period.
Nat.	Pret.	Boys.	Girls.		Feet.	Breech.	Arm.			Unav.	Accid		
2769	50	1470	1390	41	29	14	7	15	9	5	56	3 during labour, 8 after del.	32

In a letter received with the statistical account, Mr. Bailey says, "In funis presentations, turning was necessary at as early a period as could be, by which the life of the child was preserved."

"Regarding the deaths, one occurred in an extraordinarily sudden manner, and upon a *post mortem* examination, no cause could be assigned; it took place ten hours after delivery, and without hæmorrhage. The other was in a delicate and diseased woman, who appeared to die from exhaustion; her labour was natural, and only four hours in duration. Two died from hæmorrhage some hours after labour; and five from consumption within the month." There occurred five presentations of the placenta, in two of which the placenta was expelled prior to the child; "and in the others the common and prompt method was had recourse to." In hæmorrhage, after expulsion of the placenta, "the most effectual means to suppress it were injecting cold water, and pressure over the womb."

Of the still-born, two "had a transposition of the abdominal viscera into the chest, two were acephalic, and two what are called cat's-head; in most of the remainder there was no evident cause."

Having learnt that the midwife of Swaffham had kept a list of midwifery cases attended by her during twenty-seven years, I requested leave to examine it, and have extracted the following information:— One thousand five hundred and seventy-three women gave birth to one thousand five hundred and ninety-nine children, of which eight hundred and fifteen were boys, and seven hundred and eighty-four girls. There were twenty-six cases of twins, of which, *ten* were both boys, *five* both girls, and *eleven* a boy and girl. I could not ascertain, with any degree of accuracy, the mortality of the mothers and children.

M. Quetelet, in his work "On Man and the Development of his Faculties,*" has stated the proportion of boys to one hundred girls in Great Britain to be 104.75, and the average for Europe 106.00. I find that the proportions vary greatly if taken from the limited numbers of individual practices or small districts, and in short and long periods, as will be shown presently, so that, to arrive at the true proportion, it is necessary to take the births *en masse*. Mr. Bailey's practice gives a proportion of 102.8; but if divided into equal periods of thirteen years and a half, it stands thus:—first period, 661 boys, 577 girls; second period, 809 boys, 813 girls, having a majority of girls. The proportion in the midwife's practice in Swaffham, is about 102 if divided into two periods; the first, from December, 1810, to June, 1827, gives 425 boys, 423 girls; the second, from July, 1827, to December, 1837, inclusive, 379 boys, 342 girls. In my own practice the numbers are 316 boys, 294 girls; but in 443 consecutive births, including twins, the numbers were 225 boys, and 225 girls. Dr. Churchill's 616 births give 340 boys, 276 girls.† The proportion of males to females in the births occurring in a population of 12,632, during one year in the Swaffham Union, is 205 boys, 200 girls. M. Quetelet has also given the months in which the greatest number of births occurred, with the view of ascertaining whether the seasons exert any influence over conception; from his enquiries he learns that the greatest number of

* From Review of, in *Edinburgh Medical Journal* for October, 1837.

† Second Medical Report of the Western Lying-in Hospital, &c., published in the *Dublin Journal of Medical Science*. Vol. xiii, page 246.

births occurs in February, and the smallest in July, and hence it follows that most conceptions take place in May, and the fewest in October; he also states, "It appears that the influence of season is more decided in the country than in towns." In my small practice the greatest number occurs in January and April, and the smallest in June. The following table exhibits the state of this question in Mr. Bailey's and the midwife's practices.

	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Mr. Bailey's cases.....	279	246	262	264	244	212	218	248	226	202	207	252
Midwife's cases.....	146	118	153	162	140	102	134	124	112	141	110	144

The celebrated Mantell has given a brief statistical account of his practice in midwifery at Lewes, in a paper on the Secale Cornutum, published in the *London Medical Gazette*.* It has been quoted by Dr. Bisset Hawkins, in his *Elements of Medical Statistics*.†

* Vol. ii, page 782.

† Page 123.

ARTICLE VII.

CASES OF HERNIA CEREBRI,

WITH REMARKS.

BY G. MALLETT, ESQ.,

Surgeon, Bolton.

THE following observations are not intended to enter minutely into the subject of injuries of the cranium and brain in general, but will be confined almost entirely to those compound fractures of the skull, which are attended with injury and loss of substance of the brain, and followed by the disease denominated hernia cerebri.

It appears to me that there are no cases in which more various and discordant opinions have been given by the profession,* than those upon hernia cerebri, whether considered with reference to its treatment or pathology. It is, therefore, clearly desirable that any one who meets with cases of that description, and which are likely to elucidate the subject, should make them generally known.

Residing in the midst of a mining district, where injuries of the head of a severe nature are of frequent occurrence, I have met with several cases

* *Vide* Stanley, Sir A. Cooper, S. Cooper, Larrey, Thompson, Abernethy, &c.

Mr. Mallett's Case.

Appearance of Hernia Cerebri on the head of Wm. Howcroft prior to its removal.
Vertical Section of the same tumour made after the operation.

a. Thin covering of granulations
b. Cineritious Matter
c. Medullary Matter
d. Cavity in the centre

which I think will be considered interesting and useful, as indicating a mode of treatment that in these cases has been uniformly successful; also in assisting to arrive at the correct pathology; and, lastly, in pointing out the probable cause of the origin of the hernia, and the best means of its prevention, the occurrence of which certainly complicates the case, and increases the danger. I will now briefly relate five cases of injury of the skull and brain and their treatment, and afterwards make a few observations upon them.

John Isherwood, æt. 36, received, while standing at the bottom of a coalpit, a wound upon the forehead, from the falling of a piece of coal from the mouth of the pit. The scalp was much lacerated and contused, and the os frontis shattered near its most central point, but rather inclining to the left side. Many fragments of bone and coal had penetrated the brain, and about three or four tea-spoonfuls of its substance was found lying upon the hair and face; there was no stupor or paralysis, neither did there appear to be that nervous shock or disturbance to the constitution which might have been expected to have occurred from such an injury. The wound was cleaned, and several small pieces of coal and twelve fragments of the frontal bone were removed from the brain, having penetrated its substance more or less deeply. One of the portions of coal, measuring an inch in length and half as much in breadth, was found resting upon the floor of the left orbitary plate. The pulse being about the natural standard, no bleeding seemed requisite; quiet, abstinence, and aperients, when necessary, were

directed. Nothing particular occurred till the tenth day, when a small hernia cerebri began to make its appearance, which increased till it had attained the size of a large walnut; it then remained stationary until various small portions of the inner table of the cranium had exfoliated, and then, assisted by slight pressure it gradually disappeared, and the man completely recovered. He resumed his occupation, that of a collier, as well as the practising a variety of Merry Andrew tricks, such as standing upon his head, tumbling, &c. He died five or six years afterwards from apoplexy.

Abraham Johnson, æt. 6, received a kick from a donkey, producing a compound fracture of the occipital bone; a considerable portion of it was depressed into the brain, and a small fragment disconnected from the rest of the bone; the former was elevated, the latter removed. The case did well without any untoward symptom.

J. Bates, æt. 18, when in a coalpit, was struck upon the head by a lump of coal falling from the roof of the mine. It produced a compound fracture about the centre of the sagittal suture. Some small pieces of bone which had been driven into the substance of the brain were removed. In eight days a little elevation or growth from the brain appeared, which continued about a week, when a small piece of coal was discharged, about the size of a pea. The rising then gradually disappeared by the sole application of lint, wetted with very diluted nitric acid. No unpleasant effects remained as the result of the accident.

J. D., æt. 4, was playing in the middle of a

public road, and not hearing the approach of a cart and horse, was knocked down by the latter, and then trod upon by its fore feet. The upper and central part of the frontal bone was driven into the brain, and two or three spoonfuls of it were spattered upon the face and hair. One side, the left, was completely paralysed, and the thigh bone of the same side broken about the junction of its upper third. The broken and loose portions of the frontal bone were removed, and the wound dressed lightly. In about a week hernia cerebri made its appearance, which, in spite of pressure and various local applications, gradually increased till it had gained the size of a large duck's egg; it then remained stationary for a fortnight, when I determined to remove it by means of the knife. The operation was performed in a few seconds, and apparently without the little patient being sensible of any pain. The wound was then accurately examined, and I found a spicula of bone projecting from the inner tablet of the skull; it was removed, and the wound was completely cicatrized in about six weeks. After the operation there was again a slight inclination to rise up, but the application of lint, and nitric acid much diluted, soon reduced it to its proper level. The paralysis gradually disappeared, but a slight lameness still remains, and whether that is owing to a remnant of the paralytic affection, or to the not very exact union of the fractured femur, it is difficult to say

William Howcroft, æt. 12, received a severe injury from the falling of a piece of coal from the mouth of a coalpit, at the bottom of which he was standing; the scalp upon the upper part of the forehead was

extensively lacerated, and a circular portion of bone, partly from the upper part of the os frontis, and from the anterior angles of the two parietal bones, about an inch and a half in diameter, was driven into the brain to the depth of at least three quarters of an inch. The patient was sensible, but the right side was completely paralysed, and the sight of the right eye nearly gone, the pupil being much dilated. The fractured and loose portions of bone were taken away, the wound simply dressed, and slight pressure made upon it by means of a bandage. For several days nothing worthy of note occurred; the pulse continued about the natural standard, there was no fever, no delirium, and a little medicine caused the bowels regularly to evacuate their contents. At the expiration of a week, a rising from the substance of the brain was observed, which resisted all our efforts and applications to restrain, till it had increased to the enormous magnitude of being in its long diameter, which was from the frontal to the occipital part of the head, six inches, laterally it measured three inches and a half, and in elevation it was two inches and a half. After trying, without effect, as much pressure as appeared to be prudent, and the application also of several topical applications, I resolved, as the lad was evidently sinking from constitutional irritation, to remove the mass with the knife, which was done in the presence of two professional friends, Dr. Hawarth and Mr. Moore. There was but little bleeding from the operation, and the sensibility of the part was so low, that the patient scarcely knew when the knife passed through the tumour; when the knife was about half way through it, something

presented a slight resistance to its progress, which afterwards proved to be a small portion of loose bone. In a few days there appeared again a disposition in the brain to shoot out, but the application of pressure and the diluted nitric acid controlled it. About a fortnight after the operation, the boy was able to move the paralysed leg slightly, and in another week to walk across the room without any assistance, though still very lame. In eleven weeks from the time of the accident, I had the pleasure of seeing him make his appearance in the surgery, a distance of two miles and a half from his home, which distance he had walked; but a slight lameness still remained. The wound was quite cicatrized, but the newly formed cuticle was very tender and irritable; perfect vision had returned to the eye, but the arm remained useless. The last time I saw him the arm continued in the same helpless state, but in every other respect he was much as before the accident, both as to his general health and his intellectual capacity.

In the former part of this paper I observed that I considered the above cases interesting and useful, inasmuch as they throw light upon the treatment, pathology, and cause of hernia cerebri,—subjects certainly involved, in some degree, in doubt and uncertainty. I will now make a few observations which seem naturally to result from an attentive consideration of the circumstances of the cases; and firstly, with reference to the cause and consequent preventive means to be employed, it will be seen that four of the five cases above mentioned were affected with hernia cerebri, and that in each

of these four cases a foreign body was found acting as a constant source of irritation, and knowing how generally the occurrence of irritating bodies found in other parts of the system is followed by excrescences, partaking more or less of the nature of the part from which they proceed, I think it extremely probable that without some such irritating cause, we should not have hernia cerebri, which opinion is much strengthened by the other case, in which the complaint did not come on, as no broken and loose portion of bone, or any other extraneous particles, were found at any period of the progress of the case after the first dressing.

I am very far from wishing it to be understood as considering it certain, that without foreign irritation we cannot have hernia cerebri as the result of injuries of the brain, but I think enough has been said to establish a high degree of probability that there is a connection between the two, and, consequently, that we cannot be too careful in removing, not only all the parts perfectly loose, but also all the points or spiculæ of bone that may still be adherent to the cranium, if they are likely to press upon the brain. I would also recommend that the finger be gently pressed into the wound, so as to examine into the state of the interior table of the skull, and if any portions of it appear so cracked or broken, that it is probable they will exfoliate and be thrown off, if not removed, it is better that they should be taken away, even if some slight violence be necessary to extract them.

Treatment.—With regard to the treatment of the above cases after the disease had come out, it will

be perceived that I have thought it necessary to give only so much of it as appeared requisite to the correct understanding of the cases, and that I have generally avoided giving the daily minute details, which will be sufficiently understood when I say that they were conducted in accordance with the general principles of surgery. In every case when the hernia first commenced, moderate pressure and various topical applications were used, but in two of the cases they were found totally inefficient to restrain the progress of the complaint; and in the case of Howcroft it increased to the enormous magnitude mentioned. It was then removed, and the result is a satisfactory proof that, in cases of necessity, the mass, no matter how large, may be at once cut off with safety and advantage. After the operation, let the wound be carefully examined, to be certain that there is no irritating cause remaining likely to bring on its reproduction. If, after this, there should be a disposition to its reproduction, moderate pressure and the daily application of the nitric acid, reduced to the following strength, will be the best applications:—℞ *Acidi Nitrici* m. xl., *Aquæ fontanæ* f. ʒ ij., *Fiat Lotio*. I am unable to assign any particular reason why the above application should be more effective than any other, but the result after each application decidedly proved it to be so.

Pathology.—Some writers have viewed the tumor as true brain, rising in consequence of the due pressure of the skull being removed from the part; others have considered it as consisting of mere fungous granulations; but I imagine that the ex-

amination of the large mass removed from Howcroft will demonstrate that it could not be merely either one or the other, but a formation externally, by the vessels of the brain, of matter similar to that which they are accustomed to secrete. The examination of the tumor after its separation was as follows :— The appearance of the cut part upon the head was that of medullary matter surrounded by its cineritious or cortical envelope, and of course the corresponding section upon the tumor was similar. The exterior of the tumor was formed by a very thin layer of granulations of a brownish colour. A vertical section being made through the mass, it exhibited throughout, immediately under the above mentioned thin granular covering, a stratum of the cineritious matter, nearly half an inch in thickness, where it was cut from the head, and it became gradually attenuated as it receded from that part, till at the most distant or highest point it was so thin as to be scarcely perceptible. The remainder of the tumor so resembled the medullary structure of the brain, that no eye could detect the one from the other ; the only difference being, that it was not quite so firm in structure as the brain usually is. In the centre, a cavity was laid open by the section, containing about an ounce of a limpid serum ; the cavity was lined throughout by a beautiful transparent and glistening membrane, and if the shape had not been different, it might have been mistaken for one of the ventricles of the brain.

A section of the smaller tumor removed from the head of the boy, J. D., exhibited precisely the same structure, but there was no cavity in the centre.

At the commencement of these remarks upon the pathology, I observed that, in my opinion, the examination of the above tumors would demonstrate that they were not formed merely either by fungous granulations, if by the term fungous granulation a structure be meant differing from the part from whence it proceeds, or by an elevation of the brain formed within the skull, the pressure retaining it there being removed. It will be seen that in no perceptible way did the mass exterior differ from that within, consequently it would not be what I understand to be the meaning of the term fungous granulation; and I think that the existence of a cavity within the tumour lined with serous membrane, and which cavity has no existence in the natural structure of the brain, proves that it cannot be a mere elevation of the brain, but a formation of matter similar to the brain, the vessels of which newly-formed part, have also, if I may so express it, the same formative nisus as the vessels of the brain, from which they are derived.

If it be granted that the tumor be composed of brain recently formed, it would be a curious subject for speculation as to whether it be capable of performing any of the functions of brain, or the cavity within any of the functions of the ventricles, whatever they may be.

ARTICLE VIII.

A

CASE OF INTUS-SUSCEPTIO,

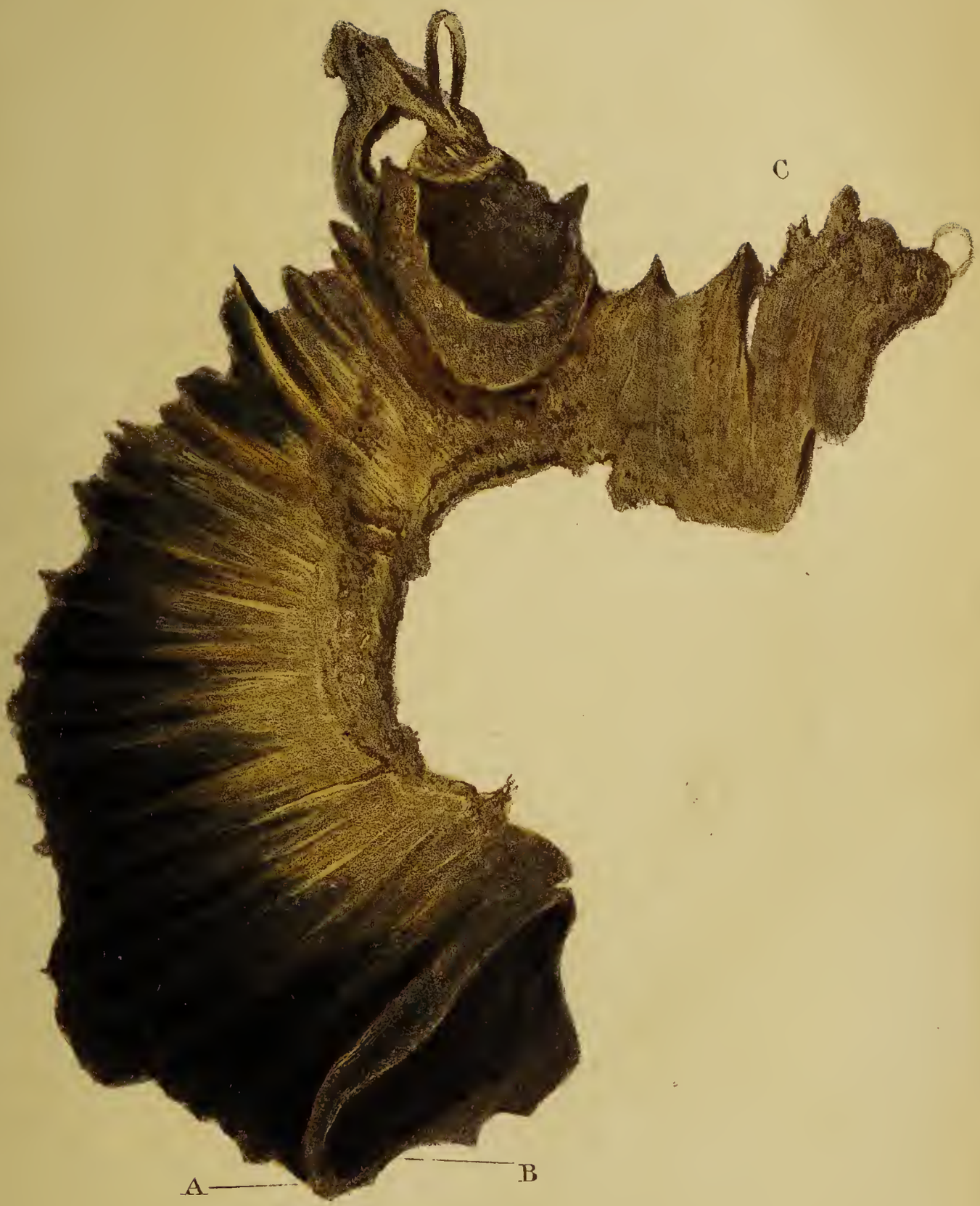
WITH SEPARATION OF FIVE INCHES OF INTESTINE,

FOLLOWED BY COMPLETE RECOVERY.

BY JOHN FOX, ESQ.

Surgeon, Cerne Abbas.

Henry Diment, æt. 16, residing in the parish of Nether Cerne, was taken ill on the morning of Monday, September the 10th. I first saw him at four in the afternoon. On enquiry, I found he had felt a little uneasiness in his bowels on the preceding day, with a slight sense of chilliness, and had taken a little milk and water, with a small quantity of bread in it, instead of his usual more substantial breakfast; that he had eaten some nuts on the 8th, but had prior to the 9th enjoyed an excellent state of health. He told me he had passed a restless night, and had suffered from dull pain about the navel for a minute or two several times in an hour; that he had taken several ounces of castor oil without effect, and that the bowels had not been opened for twenty-four hours. On examination of the lad, I was particularly struck with the mild and patient expression of his countenance; his tongue



M.r Fox's Case of Intussusceptio.

A. *a portion of the intestine turned back to shew the state of the interior*

B. *The mucous membrane black, softened, and engorged with dark grumous blood*

C. *a considerable portion of mesentery*

was slightly coated, but moist; he had no thirst; pulse 82, soft, and a little irregular; skin natural; urine of pale straw colour, and passed without inconvenience. The abdomen appeared somewhat tumid, but the pain, which he described as a "dull, griping pain," was diminished by steady pressure. I prescribed five grains of calomel and one grain of opium, to be taken immediately, and half an ounce of castor oil every four hours, until the bowels had been freely opened.

Sept. 11th, seven A.M.—He has passed a sleepless, restless night; the same kind of pain continues about the umbilicus, not increased on pressure; thirst more urgent; has rejected every dose of the oil; pulse 96, small and intermitting, but soft and easily compressible; skin rather perspiring; tongue moist and white; urine natural; no anxiety of countenance; slight fulness of abdomen. I now directed him to take two grains of calomel and eight of compound extract of colocynth every four hours, until relieved, and with each dose of the pills a saline aperient in a state of effervescence, and if the pain and constipation continued, to be put into a hot bath for twenty minutes in the afternoon. Eight, P.M.—Worse; skin hot; pulse 102, intermits every six or seven beats; face slightly flushed, but countenance not anxious; medicine and every thing else taken during the day immediately rejected; was free from pain whilst in the bath, and dosed a little for half an hour afterwards. I examined the abdomen again; it was not more tumid; and I could not detect any unnatural fulness in any part, but firm pressure around the navel produced uneasi-

ness; the pain had been constant for several hours, but more violent at intervals; there was no hernia; twelve leeches were ordered to the abdomen, to be followed by warm fomentations with scalded bran; a common purgative injection to be administered, and the hot bath to be repeated if necessary; and a pill containing one drop of croton oil every two hours.

September 12th.—He has passed a sleepless night; pain almost constant, and very severe at intervals; slight pain is also felt on pressure over the epigastrium; sickness continues; every thing taken immediately rejected; belly rather more tumid; it appears somewhat fuller and harder about the centre of the *right* iliac region than on the opposite side; pulse 104, small, but soft, intermits every fourth or fifth stroke; urine rather scanty, otherwise natural; skin hot; tongue white, but moist, and there is little thirst; a blister, containing two grains of muriate of morphia, ordered to the epigastrium; the hot bath and injection to be repeated as well as the pills, should the stomach be more disposed to retain them; a little soda water to be also given.

September 13th.—The hot bath had been used twice during the preceding day and night, with temporary relief to his sufferings; several injections had also been given, but they had been retained a few minutes only, and then returned unstained with feculent matter. The blister, with the morphia, appeared to have had a very beneficial effect on the stomach, as there had been much less vomiting, and six of the pills had been retained. The night,

however, was one of great suffering, and the pain had gradually increased during the last six hours; at seven this morning he had severe bilious vomiting; the skin was of a more pungent heat; the tongue very white, but still moist; the thirst more urgent; the face flushed, and for the first time there was an expression of anxiety; the eye was bright, with dilated pupil; the belly more tumid; the pain also now much increased on pressure, and most severe about midway between the umbilicus and spine of right ilium; pulse 116, small, irregular, and somewhat sharp. V. S. ad deliquium was performed with immediate relief; bath again ordered if the pain returned. *Hyd. chlorid.* gr. v., *extr. colocyn. comp.* gr. v., *opii.* gr. $\frac{1}{2}$, *tertia quaque horâ sumat,* and, if the bowels are not moved, an injection with *spt. terebinth.* to be administered in the evening. I now came to the conclusion that I had a case of intus-susceptio to deal with, and I endeavoured to explain the nature of it to the poor boy's mother, and to prepare her for a fatal termination. My friend Dr. Seagrim, a retired physician, happening at this time to be on a visit at the boy's master's house, kindly saw him with me, and concurred in my view of the case.

Sept. 14th.—Has passed a more quiet night, with a little sleep, and appears to be under the influence of the opium; the vomiting, however, continues if any fluid be taken, even to the extent of a tea spoonful; the bowels have not been moved; are slightly tympanitic; pain less acute, but constant; the skin hot, with disposition to be moist; *tongue moist* and *less coated;* injection retained a few

few minutes only; pulse 122, irregular, small, and weak; pills, with calomel, colocynth, and opium, to be continued; if the pain increases, hot bath and fomentations to be repeated.

September 15th.—Has dosed a little during the night, but has never been free from pain; four doses of the pills have been retained; face a little flushed; countenance looks sunk, but *decidedly less anxious; tongue clean and moist;* skin burning hot and dry; pulse 136, very irregular, and small; occasional bilious vomiting, and is afraid to take more than a tea-spoonful of fluid at a time, as it produces immediate vomiting; belly slightly tympanitic, and generally tender on pressure; the pills to be continued, and a liniment, with the *potass. tart. antimon.* to be rubbed into the abdomen every four hours; if pain increases, an injection with two drachms of *liq. opii sedativ.* to be thrown up, and in the mean time from two to three quarts of thin gruel to be forcibly injected.

September 16th, seven A.M.—Has passed a night of constant pain and vomiting, and had been wandering a good deal at times. I found him on the floor, resting on his knees and elbows, with a bason between his arms containing a large quantity of fœculent matter, and one large lumbricus; every thing had been rejected, and he now complains more of the "dreadful sickness" than of the pain. The pulse was 140, irregular, and very small; skin dry and burning hot; tongue clean but dry; belly tumid as before, less pain on pressure; urine scanty, otherwise natural; countenance looking pinched and haggard; says he feels a little drowsy and

confused. The opiate injection was given during the night, but returned immediately. Two minims of acid hydrocyan. (Scheel's strength) were directed to be taken every hour if the sickness continued. Eight P.M.—Has been seen during the day by Dr. Seagrim, who considered the case hopeless, as well as myself. Six doses of the hydrocyanic acid have been taken. The sickness is a little diminished, but still very distressing at times. The medicine has not been given during the last three hours, because he was considered to be dying, and his mother did not like to have him disturbed. Eyes and countenance still more sunk; tongue dry and brownish; skin dry and burning hot; pulse 148, irregular, and small; belly tumid, but bears pressure better; had felt chilly for a few minutes during the day. It now occurred to me to give inflation a trial, as formerly recommended by Dr. Hall, but I certainly did not anticipate any good result from it, as the remedy came so late, and the case appeared so desperate; however, I thought it my duty, and I therefore immediately procured a bladder, and secured one end of it to the nosle of a pair of bellows, and the other end to a common enema pipe, and having introduced the pipe its full length into the rectum, the bellows were set in motion by my pupil, and inflation forcibly but slowly persevered in for many minutes, until the poor boy complained of a disposition to "break wind," and said that his "belly was very tight." The convolutions of the intestines could be seen and felt distinctly, the arch of the colon most so; the tube was now withdrawn, and, to my great surprise and gratification, in about

twenty minutes he said he felt as if he should soon have a stool; he was therefore lifted and supported upon the bedpan, when he passed off wind in large quantities, which in a few minutes was followed by a very copious and liquid evacuation, containing, however, a few hard lumps. From this time the sickness ceased, and he expressed himself as being much relieved. A little soda water and milk was allowed.

Monday, September 17th.—Has passed a tolerably quiet night, dosing at intervals; no sickness; perfectly collected; has had six more copious stools; tongue still dry and brown; pulse 118, very small, but more regular; abdomen tympanitic to a great degree; slight pain, on pressure, between the umbilicus and right ilium; enjoys the soda water and milk; to have a little biscuit soaked in warm milk and water or tea, and to take a draught with Infus. Rhei and tinct. card. comp. immediately.

September 18th.—Improving in every respect. Has passed an enormous quantity of flatus, and several copious evacuations; bowels less tympanitic; edges of tongue moist; pulse 110, soft, and free from intermission. A cup of weak chicken broth allowed.

September 19th, 20th, and 21st.—Has continued to improve slowly; the pain, on pressure, has daily lessened; bowels still tympanitic, have been freely opened, the stools are much too pale; the tongue still dry in the centre; the skin dry and hot, with pulse 104; has taken his aperient daily; the draught ordered to be repeated every morning, and to take the two following pills at bedtime, viz., *pil. hyd.*

gr. v., *extr. colocyn. comp.* gr. iij., *extr. pap.* gr. i., *Fiant. pilul. duæ.*

September 22nd.—I did not see my patient until late in the afternoon of this day, when I found him decidedly worse, notwithstanding the bowels had been freely moved, and the evacuations were healthy; the pain on pressure too was much less, but the pulse had again mounted to 120, and was small and somewhat irregular without intermission; the tongue was dry, and the thirst urgent; the skin also hot and dry; his expression was anxious, and his present irritability formed a strong contrast to his hitherto calm and patient resignation. A saline draught, with tinct. digital. and tinct. hyoscyam. was ordered to be taken every four or five hours, and I left him with a promise to see him again early the following morning, but at the same time with a firm impression on my mind that the case would even now prove fatal.

September 23rd.—On my arrival this morning I was much gratified and surprised to hear that about six hours after I left last evening my patient's bowels had been very copiously moved, that he had afterwards slept for nearly two hours, and that he expressed himself as feeling in every respect more comfortable; at the same time, however, his nurse told me she "supposed he would not last many days longer, as a large piece of his bowels had come away with one of his stools." I immediately examined the stool, removed the substance alluded to, and having carefully washed it, I found that the woman's suspicions were correct, and that it was indeed a portion of one of the intestines, with some

of the mesentery still adhering. The drawing accompanying this was taken on the following morning by a young friend who happened to be on a visit to my house at the time, and is a *fac similie* of the original, which is at present in my possession. On visiting my patient, I found his nurse's statement correct; he was in every respect more comfortable, although the skin was still hot and dry, and the pulse 112 It will be unnecessary for me to detail the little changes which daily took place from this time, suffice it to say that the treatment consisted of mild aperients, with a gradual improved diet, and that at the end of a fortnight he had gained flesh and strength sufficient to enable him to remain up for several hours during the day, although the bowels remained slightly tympanitic, and a little pain was still felt on firm pressure. At the end of another fortnight, however, I took my leave of him; he was then able to walk about, and, with the exception of being somewhat paler than before, appeared in excellent health. I ordered him to keep his bowels lax for many weeks with an occasional dose of castor oil. It is now nearly four months since his illness, and he continues in perfect health, the bowels acting regularly. He follows his usual occupation of milking, exercising horses, &c., without inconvenience.

On reviewing this case, it appears to me worthy of remark that on the fifth day, when the boy's danger was hourly becoming more urgent, his tongue, which up to this period had been moist but coated, should now become perfectly clean, and the expression of his countenance much less anxious.

I think there can be little doubt that the termination of the inflammation in mortification of the strangulated portion of the intestine gave rise to this marked improvement. It may be asked, why, having once come to the conclusion that I had a case of intussusceptio to deal with, did I not bleed more freely, both generally and locally, and try the effect of inflation on the early part of the fourth day instead of deferring it till the latter part of the sixth? I can only answer, that it did not occur to me before the sixth day, when all other remedies were exhausted. This has been a source of great regret to me, as I have little doubt that the remedy would have proved sufficient for the cure of the evil if it had been applied thus early, I have, however, the satisfaction of believing that late as the remedy came, it was still early enough to be the means of saving the poor boy's life, by tearing asunder the attachments between the dead and the living intestine, and thus assisting nature in her work of reparation, whilst the inflammation set up by the obstruction proved essentially a restorative process.*

* An account of several recorded cases of this description, drawn up by Dr. William Thomson, will be found in the *Edinburgh Medical and Surgical Journal*, vols. xliv, xlv, and xlvi.

ARTICLE IX.

A

CASE OF MOLLUSCUM.

BY C. FOWLER, ESQ.,

Surgeon to the Cheltenham Dispensary and Casualty Hospital.

As cases of molluscum are of extremely rare occurrence, and have hitherto received no very clear pathological description from writers on diseases of the skin, I have subjoined an account, and given a drawing of this cutaneous phenomenon, which I trust may be of some service to those pathologists who wish for further illustrations of the external character and morbid anatomy of this disease.

Wm. Jones, aged 68, a single man of a sanguine temperament, and a day labourer in the parish of Ashchurch, was admitted into the Cheltenham General Hospital and Dispensary, on the 22nd of October, 1838. His admission was kindly granted me by the Governors, for the purpose of making a drawing of the disease, and investigating the nature of its structure. The patient reported himself to have been one of a family of nineteen,—never to have contracted any syphilitic complaint, or suffered from any kind of disease, hereditary or otherwise. His character was that of a cheerful

man of a low order of intellect; but his mind was sufficiently alive to the interest his case had excited amongst professional *virtuosoes,* since his eye instinctively detected them, and upon their approach he made his bow and commenced the process of unbuttoning with an expertness which past pecuniary favours had taught him.

This singular affection, he states, first made its appearance about twenty or thirty years since, commencing in small accuminated elevations upon the waist and wrists, and gradually increasing to their present magnitude. The large and pendulous tumor hanging from the crest of the left ilium, and which it was customary with him to place in his breeches pocket for support whilst at work, was the first that made its appearance; this, and another large one between the arm and thorax of the same side, were the only ones which, from occasional subjection to pressure, gave him any degree of uneasiness or pain. These tumors were thickly disseminated over the whole cutaneous surface, from the crown of the head to the sole of the foot, and varied in size from the smallest visible elevation of the skin, to the one seen on the left waist, which weighed about three quarters of a pound; some of them were attached by broad bases, and others by stems of various degrees of length and magnitude. The tumors upon the back and waist were the most thickly set of any, and looked like clusters of reddish grapes; those upon the abdomen and hips were longer and more irregular in form. The skin covering them was perfectly sound, but possessing more of a rose tint than the surrounding

integument; in those, however, that had been subjected to pressure upon their summits, the colour had changed to a dirty blueish grey, the skin likewise was very much attenuated, and easily raised from, and rolled over the subjacent tumors; forcible compression with the fingers seemed to produce very little uneasiness in them, and the sensation to the touch, when handled, very nearly resembled that of fatty tumors, only somewhat harder in consistence, and many of them, particularly the larger ones, were distinctly lobulated.

Two of these tumors, of moderate size, situated upon the abdomen, were removed for the purpose of analysing their structure; and on making a section of them, no very great difference was observable in them from the appearance of fatty tumors generally; there was the same semi-transparent yellowish tinge pervading the whole mass as in the latter, but the consistence was denser, the cut surface smoother and firmer, and the substance more uniform throughout. The skin was easily reflected from them in consequence of its loose connection, and a fine cellular membrane surrounded the whole, and dipped into the interstices of those that were lobulated. The excision of these tumors was accompanied with the loss of but a few drops of blood, which were evidently supplied by the surrounding integuments, for no nutrient vessel could be discovered entering at their base.

The character of these growths appeared to be of the same specific structure throughout the whole body, with the exception of one upon the crown of the head, which, to the sight and touch, indicated

its contents to be of an atheromatous nature, and, upon puncturing it, this supposition was corroborated.

I shall now conclude this case with a few remarks which naturally suggest themselves when contrasting it with the few other examples of this disease, adverted to by cutaneous pathologists; but previous to so doing, I shall here transcribe Mons. Rayer's definition of the disease, the more especially, as it will serve to identify my own case as one of molluscum, and aid as a test in separating the true from the spurious description of this disorder:—"Molluscum," observes this excellent writer, "is a chronic affection of the skin, characterised by solid tumors, developed at the expense of this membrane; slow in their progress, and their dimensions varying from that of a pea to a pigeon's egg. These tumors present a variety of forms; some are round and globular, and others flattened, oval, and irregular; generally they have a large base, and others are more rarely and decidedly peduncular. In some cases they are of a reddish tinge, but more often preserve the natural colour of the sound integument. Their development and progress appears to be dependent upon no interior derangement; they rest stationary during a long period, and even during life."

On reading this description, and comparing it with the foregoing case, the reader will be struck with the close resemblance in all points of the detail; but Bateman, in his synopsis of cutaneous diseases, and from whom the above description is partially borrowed, speaks of the contents of these

tumors being atheromatous. I should suppose that this is merely an accidental occurrence, as was the case with one situated on the crown of the head in my own patient; and I infer that it cannot be an essential character for the following reasons:—First, because atheromatous tumors shew a frequent disposition to inflammation; secondly, because they are elastic, and rather fluctuating by the touch; and, lastly, because it is incompatible with these tumors to grow from sessile and peduncular bases. Although these growths are perfectly distinct, they may no doubt have a simultaneous origin, and their coexistence may have led to mistakes respecting their identity; it is easily conceivable that the same diseased action which produced the molluscous tubercle might, by spreading to and inflaming a sebaceous duct or follicle, have given rise to an atheromatous tumor.

Monsieur Rayer again observes, in an article upon the disease, "that the structure of these tumors has never been described by any pathologist, but that M. Velpeau has published under the name of Specific Tumors of the Skin, a case which appears to be one of molluscum." As the case is an interesting one, I shall here transcribe it, particularly as it tends to shew that, under certain modifying circumstances of constitution or otherwise, these tumors may undergo changes in their character and morbid actions:—"On the 14th of July, a man of thirty-five years of age, and good constitution, was admitted into hospital, having upon his body about a dozen tumors of a specific character, formed at the expense of the skin, and

disseminated over different regions of the body—the face, neck, chest, the crest of the ilium, flank, &c. Thirty years had elapsed since the appearance of the first of them; the others had been developed and subsequently dispersed many times within the last ten years, under the employment of various topical applications; their form was slightly flattened and elongated, their size about equal to the extremity of the thumb; they appeared to be covered by the epidermis, and their surface was irregular and rough, their colour similar to the skin, and they might be strongly pressed without giving the patient pain. In a word, all their external characters seemed to indicate tumors of a fibrous nature. Nevertheless, there was one of them which differed in some respects from the others; situated on the external part of the right lumbar region, its form very much resembled that of a mushroom considerably flattened; its body was one inch in thickness, and about four inches in width, and its peduncle measured about three in circumference; the surface towards its base presented the natural appearance of the skin, but the upper surface, on the contrary, was of a dirty reddish grey colour, soft like fungus, and discharging a thin humour of a sweet but disagreeable odour. For three months that this discharge had existed, it was easily made to bleed, and the pressure of the body on it in the recumbent posture rendered it so painful as to induce the patient to apply for relief. This tumor was extirpated on the 16th of July, by M. Berard, in the presence of M. Roux. The results of the operation were attended

with no particular circumstances, except that the other tumors became softer, and completely disappeared whilst the wound was cicatrizing. All of them, in the first instance, offered the appearance of a small abscess previous to its resolution, and the phenomenon had taken place, according to the patient's statement, several times. This occurrence appeared the more singular and worthy of notice, as the tissue of the tumor which had been removed did not appear to be of a nature easily convertible into a purulent collection. It was evidently a *degenerescence* of the external layers of the skin, having nearly the consistence of scirrhus, but differing from it in its want of *homogeneousness*, in its granular structure when cut into, and in many other circumstances. Words will give but a very inexact description of its structure, nor do we know of any substance with which to compare it. Let us remark only, that it cannot be assimilated to scirrhus, to fungus, to bodies simply fibrous, to cancers of any description, nor, in fine, to any tissue hitherto described. It would appear that the skin, extremely attenuated in two-thirds of its thickness, and intimately mixed with exceedingly numerous grains of concrete caseous matter, constituted its structure,—in a word, it forms, in our opinion, a distinct and undescribed variety amongst pathological productions."

For further particulars relative to this singular and interesting disease, I refer the readers of these *Transactions* to Rayer's excellent Treatise on the Skin Affections, where they will find the subject more amply discussed than in any other writer. It will be sufficient to add that the subject of my

own case has taken the errand-boy of the hospital as his travelling companion and showman, and that it is his intention to visit the professional gentlemen in most of the great towns, who, I think, upon contrasting the original with the accompanying drawing, will find that the copy is far from being an exaggerated delineation of the natural appearance. I conclude by rendering my acknowledgments to Mr. Moss and Mr. Williams, of Cheltenham, the former for his kindness in procuring me so interesting a case, and the latter for his faithful representation of the disease.

ARTICLE X.

ON THE

PHYSIOLOGY OF THE BRAIN

AS THE

ORGAN OF THE MIND.

BY CHARLES COWAN, M.D., E. AND P.,

Physician to the Reading Dispensary.

"By what means these phenomena have been produced, physiologists in all ages have been puzzled to explain. It is, indeed, only to a certain extent that this enquiry could go. Why sensation, or other affections of mind, or the action of mind upon muscles, should arise from the existence or organization of any matter like that which composes our corporeal frame, we feel ourselves utterly at a loss to understand, because the fact itself is singular, has nothing with which to compare it, and cannot be arranged in that order which we consider as constituting cause and effect. On this point we are obliged to confess our utter ignorance in this enquiry, therefore, we necessarily look to the influence of some natural cause, capable of a peculiar application of common powers, or the operation of some agent whose powers were wholly confined to the production of that singular effect on parts possessing an appropriate structure. As, however, our Creator was pleased to provide for these purposes an apparatus so large, and consisting of such variety and complication of parts, it is reasonable to expect that each of those parts and forms must have its own particular capacities essential to the due performance of the several functions which appertain to mind. This relation it is our business to investigate, and its discovery is by no means a hopeless task."—Dr. C. Parry, vol i. p. 128.

It is the testimony of all experience, that the laws of nature have never been discovered by the mere

exercise of man's reasoning powers; but that in the acquirement of positive knowledge, we have been invariably compelled to relinquish theoretical induction, and to found our conclusions upon the materials which simple observation has afforded. No other source of real information exists, save what we derive from direct revelation, and this only furnishes us with ultimate facts, which we are called upon to believe rather than examine. The early history of every science confirms the statement we have made, and the recent progress of many sciences is entirely attributable to the rejection of unsupported hypothesis, and to the pursuit of knowledge in the way which nature has prescribed. Man's reasoning powers are adapted for generalising facts, but not for anticipating conclusions, and even when he happens to light upon the truth, he must resort to observation to confirm his conjectures.

How very vague and imperfect are our efforts to realise conceptions disassociated from the evidence of the senses! And how fluctuating their nature with the changing character of the mind in which they originate! Men differ for ever when describing their ideas of spiritual or abstract existences, each moulding his conceptions to the peculiar constitution of his own mind, and creating a system, imperfect as a representation of himself, and still less to be regarded as a transcript of the experience of another.

The systematising of mental phenomena by reflecting upon the operations of our own thoughts, while it has naturally engaged the attention of the profoundest intellects, and been the source of many attractive and ingenious speculations, has certainly

never been attended with those beneficial results, both to the investigator himself and mankind at large, which, from the interest and importance of the subject, we had every reason to expect; in fact, each philosopher has attempted to write the history of mental acts from the partial knowledge he has obtained of himself, and upheld the peculiar constitution of his own mind, as the experience of mind in general. It must also strike every reflecting observer, that the conditions of thought necessary for such abstract pursuits, involve but a partial exhibition of the mind; either excluding many feelings from observation which we really possess, or giving an undue preponderance to others whose activity we habitually cultivate. Man in the privacy of his closet is quite other than man in the strife and bustle of active life; the predatory savage, though elementarily the same, widely differs from the unimpassioned and speculative philosopher; and were each to pourtray the picture of his inward consciousness, and delineate the workings of his mind and feelings, how different would be the system of each, and how fallacious the general application! On both sides much would be overlooked, and even the same faculties or powers so unequally described, that minds differently constituted would accuse both of exaggeration or omission, creating perhaps another system more consonant with their individual peculiarities, yet equally incapable of being regarded by other minds as the faithful picture of their own.

The feelings and motives most active and habitual with ourselves would pervade and modify

our conclusions, and certain states of mind, which, from their frequent repetition, could scarcely fail to be viewed as necessary accompaniments of mental activity in others, be mistaken for elementary powers. The natural consequence must be, that each new hypothesis would rather describe the tone of thought of its propounder, than be dilineative of mind in its universality, and though containing much truth, because derived from materials in some form or other common to all, would yet be incapable of general admission, or more than personal application. It need not be argued that the description of any class of animals from a single specimen must be very incomplete, and of necessity fail to include the numerous and important varieties of which the race might consist; and any system of mental philosophy, founded upon the analysis of any single mind, can only be descriptive of minds similarly constituted, and, in proportion, imperfect as a type of mind in general.

One philosopher tells us that selfishness is the motive of our actions; another, the love of approbation; a third, the principle of utility; a fourth, the sense of duty; and yet each supposition is at once refuted by the inward consciousness of other minds, it being simply the expression of our individual peculiarities or theoretical assumption, and felt to be erroneous by those whose faculties are differently combined.

The *number* of our intellectual powers has been equally a vexatious question. We read amongst the ancients of a sensitive and vegetative soul. Aristotle divides the mind into the passive, active,

speculative, and practical intellect; Bacon acknowledged six elementary powers; Hobbes two; Descartes four; Diderot two; Condillac seven, &c., &c.; plainly proving that the method of observation was imperfect, and yet each metaphysical system savoured more of theoretical induction, than of conclusions deduced from accurately observed facts. Then we have the much debated subject of innate ideas, and see a Plato and a Descartes arrayed against a Bacon, a Locke, and a Condillac. The *classification* of our moral faculties is equally vague and unsettled; in short, in every department of metaphysical science we are deluged with differences of opinion; and notwithstanding the subject has occupied the noblest intellects which have ever adorned humanity, no system of mental philosophy, with a single exception, has ever been proposed capable of any general practical application. The reason of this must either be the inscrutable nature of the enquiry, or because we have not employed a proper method of investigation. That the subject is difficult no one can deny, but in estimating how far it is really open to enquiry, we must first consider to what extent we have availed ourselves of every means by which our knowledge might be increased, and whether we have not unwittingly been accustomed to regard mental phenomena as incapable of being submitted to the same method of observation which has proved more or less successful in the elucidation of every other function of the body.

What should we now know of respiration, had our enquiries been limited to our internal conscious-

ness of the function? And how imperfect our conceptions of the real nature of the act, if only known in the complicated form which it assumes in ourselves! To obtain a philosophical insight into the modes of acting of our different organs, it is indispensible not only to study functions, but also the instrument of those functions, and, what is of nearly equal importance, to trace both the one and the other through every grade of organisation where their presence can be recognised,—to discover their essential elementary character, and, to view them apart from those various combinations which obscure their manifestations in the higher orders of created beings. What beautiful unity and simplicity are now revealed through the light of comparative examination, where before all was confusion and hypothesis; and with what different feelings do we contemplate the lengthened chain of organic existence, or even the multiplied phenomena of the inorganic world, now that we have begun practically to admit the principle that, independently of direct revelation, we can only profitably investigate either ourselves or the world around us, by giving to facts a precedence over every induction of unassisted reason, aided by limiting the application of our reflecting faculties to the contemplation of materials which have been accumulated by diligent and unprejudiced observation.

We would not curb the intentions of genius, which often, in one fleeting moment, strike out paths where inferior minds may long continue profitably to travel, but we assert that it is not within the compass of human power to be conscious of the

attainment of truth by any other means than those to which we are now adverting. Genius *may* anticipate what observation ultimately establishes, but the truth of its inspirations can never be primarily ascertained; it pauses, as it were, in its onward course, for the slower but surer progress of less gifted minds, and only realises its own conceptions when it can view them as the expression of the facts which others have accumulated. It is, therefore, not difficult to discover the cause of the comparative failure of our efforts to establish the science of mental physiology, because the materials on which induction has hitherto rested, have been palpably insufficient for the purpose; and though every metaphysical system has involved a certain proportion of truth, having availed itself of *one* of the means which we must pursue for its attainment, viz., the analysis of internal consciousness, yet, as a whole, each has been deeply tinctured with error, inundated with hypothesis, and has succeeded in presenting but a partial and distorted view of our mental and moral history. It becomes, therefore, a question of the deepest interest, whether we *can* attempt to elucidate the phenomena of mind on the same principles, and by adopting the same means which have successfully guided us in every other department of knowledge; because, unless we connect mental phenomena with physical conditions, their investigation evidently cannot be undertaken with at all an equivalent probability of success. If they *are* dependent upon physical conditions, these at once become a leading object of our study; and it is only when they shall have been fully and fairly examined, that we can

properly infer that we are in possession of data from which a rational and abiding system of mental philosophy may be constructed. It is from severing the function from the organ, and from making an individual the type of the species, that our errors have originated, and if we would avoid their indefinite repetition, we must make the study of the organ of the mind, in all its developments, the basis of our philosophy. In accordance with these principles we may remark, that if the brain be the instrument of our intellectual and moral powers, its structure must be in relation with the number and nature of those powers; if the mind has primitive and independent faculties, a special cerebral organisation, judging from all known analogy, must exist; and if we can discover (not imagine) the particular cerebral structure appropriated to the manifestation of each faculty, we can no more question the speciality, both of the organ and function, than we can doubt the existence of our external senses, or of the distinct organs on which their exercise depends. We must not foolishly hope to penetrate the mystery of how mind is associated with matter, or what it consists of in contradistinction from matter, but simply devote our powers to the determination of whether it is not possible to seize the relations which exist between the number and degree of our moral and intellectual faculties and our physical organisation; and we again repeat that this attempt ought to precede every effort to systematise as to the number or nature of our mental functions, and be only relinquished when experience shall teach us that we are here excluded from those means of

observation which have extended our knowledge in every other department of nature. But happily the investigation we are alluding to, *has* been undertaken, and, we do not hesitate to say, with a success which its gifted originator could never have anticipated. To the results obtained we would now venture briefly to direct the attention of the members of the Association, believing, that while their truth is admitted by minds which rank foremost in the practice and literature of medicine, they are only very partially appreciated by the great majority of the profession, and that a feeling of prejudice or ridicule is often entertained and expressed in reference to the physiology of the brain, arising both from a want of information as to the value and extent of our knowledge, and from not duly considering the importance of every thing calculated to furnish us with an improved system of mental philosophy.

We cannot pretend to give more than a brief outline of so interesting and extensive a theme, aiming at becoming pioneers rather than instructors to those who have not as yet made cerebral physiology a subject of their direct and serious attention. That there exists an intimate connexion between mental phenomena and organisation, is perhaps most satisfactorily proved by referring to the daily and hourly experience of each individual. It might, indeed, with justice be asked, what do we know of mind apart from organisation? Every manifestation of its presence is conveyed through material agencies, and we are not in possession of a single function by which we can perceive other than physical

existences. The highest flights of creative genius fail to disrobe of a material covering the fairest beings it can fashion, and our conception of spirit is nothing more, when analysed, than indefinitely attenuated matter. The natural history of mind intimately links it with corporeal conditions. It is as infantine as the body; it grows with its growth, and strengthens with its strength; it becomes enfeebled by age, and falters with its declining powers. There is not a vibration of the frame with which it does not sympathise, and from all antiquity bodily and mental health have been indissolubly associated. The horrors of the dyspeptic, the delicious reveries of the opium eater, the frightful ravings of the maniac,—what are they but the consequences of certain bodily conditions? And if terror may be assuaged by a narcotic, if fancy may be stimulated by the grape, if intellect may be arrested by a blow, can we for a moment hesitate as to the close union which exists between our mental acts and our bodily organisation. But this conviction, however general it may be, is too often sterile in its effects; we stop short at the commencement of the enquiry, and do not, either from fear, prejudice, or indifference, trace it to its legitimate consequences. It is, however, essential to be deeply imbued with this primary and so demonstrable a truth, in order to pursue the investigation with any rational expectation of success.

If mind, then, is so interwoven with organisation that we can form no idea whatever of its nature but through the intermedium of the latter, the laws or the conditions by which this mysterious union is

effected, become at once a rational and intensely interesting subject of enquiry;—rational, because embracing the study of phenomena within the pale of human observation, and interesting, because tending to make us acquainted with incomparably the noblest of all our attributes. It is not, however, by philosophising in our closets, or by our own imaginings, that we can ever hope to arrive at any positive or valuable results, and every system which has emanated from such a source, only proclaims the feebleness of man's power, and the poverty of his efforts when striving to become the interpreter rather than the observer of nature.

Almost every organ of the body has been at different times selected as the seat of intellect or passion, and man's highest functions have been most conveniently shifted about, and made to occupy any portion of our frame most conducive to the theory advanced, most compatible with our hypothetical necessities, or most gratifying to an exuberant fancy. When we recal the names of Hippocrates, Plato, Aristotle, Galen, Willis, Boerhave, Haller, Bichat, with many others, and reflect on their fanciful and erroneous suppositions as to the physiology of the mind, we cannot but be convinced of the utter vanity of mere theoretical induction, and of the absolute necessity of limiting ourselves to the determination of what *is*, and not what we may imagine to exist.

Independently of any evidence founded upon the universal experience of mankind, or any other sources of mere inferential probability, we possess proofs of the brain being the organ of the mind, as positive

and direct as any we can refer to in favour of the eye being the organ of vision. By removing the hemispheres of the brain, an animal will continue for months to exercise every function which characterises it in a state of integrity, with the exception of its mental or voluntary acts, precisely as vision is the function alone deficient if the eyes are alone destroyed. Mental acts have been instantaneously arrested by the pressure of the finger on the brain; and during mental repose and activity such changes have been *seen* in the workings of this mysterious organ, as have induced the greatest of British surgeons to declare that tranquillity of mind is an indispensable condition for the cure of injuries of the brain. There is no instance on record of mind being manifested *without* a brain, and idiotcy is inseparable from a brain of certain dimensions. The organisation of the cerebral mass, and the development of mental power, are constantly in relation with each other, and it is only in the structure of the brain that we can discover a superiority in man's conformation over that of the inferior animals. There is no other organ but the brain whose injury or removal directly interferes with our mental functions, unless life itself be involved; and delirium or mental aberration is the pathognomonic sign of cerebral disturbance. It is, therefore, absolutely demonstrable that the brain is the instrument of thought, and if so, we may safely conclude that it is admirably adapted for the fulfilment of its important functions. In no department of nature do we find an instrument selected for the manifestation of a particular power, and yet

no relation observed between the intensity of the manifestation and the conditions of the instrument; indeed, a contrary supposition would virtually set aside the necessity of such an instrument, and render the power independent of its existence. We know nothing of powers or functions but as associated with particular forms of matter, and whether we speak of gravitation, cohesion, affinity, electricity, magnetism, or vital acts, we cannot practically separate the phenomena from the material or organs through which we become conscious of their presence; though it would be very unphilosophical to infer that the union was necessary, or their nature identical.

It is a fact beyond all disputation that mental operations not only vary nationally and individually, but that they are, to a certain extent, peculiar to age and sex; that our faculties are multiple and various in their character; that they are combined in every possible proportion, and that they are capable of single or collective activity. It is equally certain that the physical conformation of man's head presents infinite variety, and that there are certain forms characteristic of certain races of mankind. That men's heads are not so much distinguished by variations in absolute size as by changes in the development of particular regions of the skull, which also vary at different periods of life, and coincide with a succession of changes in mental development. Cuvier, the most celebrated of modern naturalists, says, "It appears that there are always certain relations between the faculties of animals and the proportions of the different parts of the brain. Thus their intelligence appears to be always great in pro-

portion to the development of the hemispheres and their several commissures. Man has these parts thicker, more voluminous, and more complicated than other animals, and as we recede from man, they become thinner and more simple. In like manner man excels all other animals in intelligence. It appears even," he continues, "that certain parts of the brain attain, in all classes of animals, a development proportioned to the peculiar properties of these animals, and one may hope that, in following up these researches, we may at length acquire some notions respecting the particular uses of each part of the brain."

If the brain be, therefore, the instrument of the mind, it must, unless it prove an exception to all other organs of the body, be adapted to each special mental manifestation, and it would be quite as rational to suppose the same eye to possess different powers of vision, as to imagine the same brain acting as the organ of different minds. Mind is not only multiple in its faculties, but contradictory in its operations, and the brain must equally be composed of organs adapted to these several powers, unless, indeed, we should prefer supposing the same organ to be at once the instrument of benevolence and anger, of attachment and hate, of veneration and blasphemy, of hope and despondency, in short, to be acting in opposition to every other known law of the organic or inorganic world,—an idea too improbable for a moment to be entertained. Such a view of the brain would, in fact, be tantamount to proving the independence of cause and effect, and that man might think as well without as with a

brain, an admission which, however it may gratify certain vague spiritual notions, is quite as contradictory to all experience, to all facts, as that man can see and hear as well without as with the organs of hearing and vision.

The distinctness of our external senses, which are certainly in their functions in close contact with our thoughts, would strongly imply the multiplicity of our cerebral organs, for it would be much more easy to suppose that modifications of touch might have been entrusted to a single sense, than that the brain, as a whole, should be the seat of the various and conflicting phenomena of thought. A similar conclusion is powerfully supported by what we now know of the nervous system; the more we examine it, the more distinct the functions of its several parts become; and to assert that change of function was depending on nervous distribution, and not on special organisation, would now be considered as displaying either the grossest ignorance of physiology and anatomy, or as springing from an obstinate preference of theory to fact. To admit the special functions of the nerves, and to deny distinction of parts and functions to the centres with which they maintain such uniform relations, is, indeed, to be lamentably the victim of hypothesis; and to suppose a difference in the organs of every other function of the body, but what may be termed moral or intellectual, is to assume a position which the examination of nature manifestly contradicts.

The *structure* of the brain would, *a priori*, imply a multiplicity of organs; it can no longer be regarded as a pulpy homogeneous mass, but composed of an

innumerable series of fibres, distinct from each other, each one of which might act as specially and independently as organs the most diverse in appearance, and most distant from each other. The remarkable arrangement of the fibres, their uniform distribution, the infinite care which is manifested to secure their communication with each other, as by transverse and longitudinal commissures, and the complicated but constant connection of certain portions of the brain, can only be rationally accounted for on the supposition of its consisting of a congeries of organs, capable of individual or collective activity, and of entering into every possible combination with each other. The microscope is daily discovering distinctions in parts hitherto regarded as identical, and we are already enabled to distinguish the ganglionic from the voluntary nerves, the special nerves of sense from each other, and the grey from the medullary matter; and there is no reason at all to suppose that the subject is exhausted.

"The human brain," says Mr. Solly, "is but a series of large ganglia, though their close connexion, and the great size of the commissures, give it a degree of complication which we can only unravel by seizing the thread at the simple though perfect type of a nervous system, and never dropping it till it has conducted us through all the various additions made to its fundamental simplicity, up to the perfect but complex organisation in the human being."

That the brain is not a single organ, but a congeries of organs, each manifesting a special function, may therefore be strongly inferred from physical

and analogical examination,—and, in the words of the late lamented Dr. Fletcher, we are justified in saying that the extent, the diversity, the energy and complication of the intellectual operations, are in general, both in man and the lower animals, in the direct ratio of the volume and multiplicity of the brain. We might enlarge upon the fact of mind being progressively developed as well as the brain itself; of the various mental powers being possessed in very different degrees; upon the phenomena of dreaming, monomania, &c. &c.; but our object is simply to establish a fact, and not to exhaust the evidence by which it may be supported. We think, then, enough has been adduced to satisfy the most sceptical of the probable truth of the doctrine that the brain is an assemblage of organs, each charged with a particular function.

Hitherto we have viewed the subject at a distance, and satisfied ourselves with inferential evidence, but we will now turn to positive proofs, and submit them to the calm consideration of impartial minds.

It is palpable to the most superficial observer, that the human head presents an infinite variety of forms, whether we simply look at individuals or nations; that women have differently shaped heads from men; and that there are very appreciable differences in the size and form of the head of the child and of the adult. That the heads of animals are also distinguished by peculiarity of form, which not only can be regarded as characteristic of particular races, but as peculiar to each individual of which the race is composed. These variations in form must, therefore be considered as a legitimate and highly

interesting subject of investigation; and the attempt to determine their correspondence with, or independence of, any peculiarity of mental manifestation, can surely not be regarded as exceeding the limits of the most rational enquiry. Anatomy proves that there *is* a correspondence between the brain, the acknowledged organ of the mind, and the outward configuration of the skull; and although this fact is not without exceptions, yet, for practical purposes, and in any large number of instances, the relation in form of one with the other, is such as not materially to interfere with the correctness of external indications.

Now for nearly half a century a prodigious number of observations have been made upon the form of the head in men and animals, in order to ascertain its accordance or non-accordance with particular mental conditions; and though for a long time pursued without reference to the structure or functions of the brain, they have terminated not only in establishing the fact of such agreement between form and function, but have originated a system of mental philosophy, which is the only one the world has ever seen capable of a practical application.

We have already adverted to the reasons why mere metaphysical enquiry has proved so barren and unsatisfactory, and expressed our belief that, to arrive at any definite and lasting conclusions, we must become acquainted with the structure and functions of the organ of the mind. Let us now briefly direct our attention to the means by which this knowledge may be successfully acquired. We

would commence by observing, that all inferences deduced from experiments on living animals, must necessarily be defective and fallacious, when intended to determine the separate functions of the brain; and we are the more desirous to direct attention to this circumstance, because young enquirers, perceiving that experiments of this description have not accomplished the ends for which they were instituted, are at a loss to decide on the real merits of the question, and on the value of results founded upon other means of observation. The established practice with physiologists is to cut away a certain portion of the cerebrum or cerebellum, and to observe the effect. But, we would ask, is it known what is and what is not a separate organ in the brain? Can we be sure of only injuring one organ and not another? Do we act with a previous knowledge of what are the mental powers, and can we determine when one among the number is suppressed or imperfect? Is the animal in a situation to manifest all its mental faculties, or those which are left, after having been so operated upon, and is it in our power to excite different functions to activity of whose nature and whose number we are ignorant? If we experiment on the ground of not knowing the functions of the cerebrum, is it not absurd to expect to discover their modes of acting, by observing the effect produced by the destruction of the very organ whose function we are seeking to detect? If physiologists are ignorant of the primitive faculties of the mind, how can they assert that a particular power is the sole faculty suppressed or not, and that that particular power

and no other depends upon the portion of the brain they have destroyed? They may have removed the half of an organ, or two halves of different organs; the corresponding organ of the opposite side might be entire; in fact, they are in the situation of an individual who, viewing an animal for the first time, endeavours to obtain a knowledge of its physiology by kindly cutting it to pieces. To render vivisection available for the discovery of the function of an organ, the latter must be distinct; its boundaries and distribution known; the possibility of its being injured or destroyed without materially interfering with other organs and functions must be ascertained; and after its removal, we must be able clearly to determine what functions are deficient. Now, while these conditions may be fulfilled in the section of particular nerves, they are wholly deficient in the instance of the brain, and we cannot therefore rationally expect to determine the cerebral functions by the means we have been considering.

Pathological observations, though of greater value than the preceding, are liable to many of the objections already stated, and must be received with great caution as evidences for or against the functions of particular portions of the brain; but if conjoined with the information derived from extensive physiological research, may prove powerfully confirmatory of the latter. Pursued however, as, with some rare exceptions, they have hitherto been, few will be inclined to differ from a recent writer in thinking, "that there are scarcely any investigations more unsatisfactory and disappointing in their results,

than those which have diseases of the nervous centres for their subject, in reference to a connexion between disordered function and diseased structure." And the reason of this not only depends upon the very imperfect manner in which these difficult enquiries have been generally conducted, but still more from our ignorance of the structure and functions of the brain; from changes in the nervous substance, being, from its very nature, difficult to appreciate; from disease being so seldom united to a single organ; and from the very important fact of a vast number of functional derangements taking place, and leaving no tangible organic alteration behind. Pathological research has, however, uniformly established the fact of the brain being the instrument of thought, and there is no instance on record of the mind remaining wholly unaffected, when the disorganisation had extended to the corresponding points of both sides of the brain. We are aware that many cases are adduced in which the mental disturbance was less considerable than might have been anticipated, judging from the extent of cerebral lesion; it must, however, be confessed that their details neither exhibit that knowledge of mental phenomena or cerebral structure, on the part of the narrator, which would justify any position or safe conclusions. If, however, pathology has as yet done little in localising the cerebral functions, we believe its utility is daily augmenting with the increase and greater precision of our knowledge; and already numerous facts clearly connect mental alienation with cerebral disease, and that in the assumed locality.

Having thus adverted to the reasons which render the analysis of internal consciousness, experiments upon living animals, and the study of morbid appearances, inefficient of themselves as means of discovering the separate functions of the brain, we shall now return to the consideration of another method, which, we have already said, has been extensively employed, and attended with most gratifying success. We again repeat, that this method consists in contrasting particular mental manifestations with the physical conformation of the head, and in endeavouring to determine how far these differences in form, which are more or less palpable to all, correspond to certain mental states or peculiarities, and from the knowledge of function to deduce the form, and from the form to predict the function.

With the question of how far we are capable of discovering primitive faculties, or whether these enter or not into the composition of the mind, the investigator has nothing to do; his task is simply to determine the accordance of certain mental operations with particular cerebral conformations, let the mental phenomena themselves be either forms or states of thought, compound or simple in their character. And if observation has been sufficiently multiplied to justify us in concluding that such accordance exists, it is evident that, by tracing out this correspondence, we are much more likely to arrive at correct metaphysical knowledge, and to obtain real information in regard to the physiology of the brain, than we can rationally expect from any of the purely metaphysical methods previously pur-

sued. In fact, the study of mind is at once brought within the range of strict observation, and individual conceptions are tried at the bar of our ever widening field of experience. Every mind becomes an object of separate contemplation, each cerebral configuration is individual and peculiar, and the general history both of organ and function is founded upon the same principles which have so successfully directed us in every other department of nature. We must not damp our zeal or anticipations by supposing the necessary number of individual instances to be indefinite, remembering that no science has been founded upon the observation of more than a small number of the facts which it embodies; but such is the uniformity of nature's works, that conclusions thus deduced are often as stable as they could be, had no single instance been omitted. The idea of certain parts of the brain being the instruments of particular mental functions, is not of recent birth, but it is by modern research alone that the truth of the proposition has been established. And when we reflect on what men had accomplished when left to their own feeble imaginings, and then compare their crude and clumsy speculations with the beautiful harmony and arrangement which have now been disclosed, we cannot but be deeply convinced of the limited powers of our understanding, and of the futility of our efforts to arrive at truth by any other means than what nature has enjoined.

Man's nervous system, and in particular his brain, being but a modified development of what exists in animals inferior to himself, and the former

possessing certain faculties and feelings common to both, it must be at once conceded, that the study of their simpler organization and functions must be unusually interesting, and highly calculated to elucidate the more complicated manifestations in ourselves.

Now, it has resulted from the laborious and most extensive researches of Dr. Vimont, that a correspondence between cerebral configuration and mental activity, exists in animals inferior to man, and that the amount of the intelligence, and the nature and number of their faculties, are constantly in relation with the size and complication of the brain. Dr. Vimont devoted several years to the observation of a great number of animals, reared under his immediate superintendence; and in 1827 presented to the Institute of France a memoir, founded upon the examination of two thousand five hundred heads belonging to animals of different classes, orders, genera, and species, with the habits of fifteen hundred of which he had made himself acquainted. To these were added four hundred brains, modelled in wax, and more than three hundred drawings of this organ and its osseous covering. In 1836 he published a large treatise, accompanied by an unrivalled collection of six hundred drawings, embracing the study of the brain and skull in man as well as in animals, and confirming in the most conclusive manner the fact of the brain consisting of a congeries of organs, and that the majority at least were susceptible of being appreciated by the external examination of the skull.

The method pursued by the immortal Gall, whose vigorous intellect and unparalleled perseverance first opened a path to future observers, was of all others most rational in principle, and eminently calculated to obtain the end he proposed. He contrasted individuals with strongly marked mental peculiarities with each other, and sought out, by simple inspection, the points of agreement or difference in their physical conformation. After long years of indefatigable research, he accumulated an unequalled series of facts, demonstrative, we do not hesitate to say, of the important principle, that the brain is multiple, and that the development of its different parts corresponds to certain mental manifestations. The anatomy and pathology of the brain were also minutely investigated, and he established the former on a footing which it had never previously obtained. It is but justice to remark that no conclusions were ever deduced by means more strictly conformable to the Baconian philosophy, than those of the illustrious Gall. During and since the period of his researches, numerous highly-gifted minds have followed in the same path of observation, and an amount of labour has been bestowed upon this important enquiry, and a mass of facts has been collected, exceeding all that have ever been brought forward in support of any other pathological question whatever. No one can now be acquainted with the actual state of our information in reference to the functions of the brain, and either not oppose to it a blind and unqualified disbelief, or admit that we are in possession of knowledge far exceeding in interest and importance any that we have ever

previously acquired ; and though it is far from our intention to assert that our acquaintance with cerebral functions and organisation is no longer beset with difficulties, yet we are anxious to excite the attention of medical men to the fact, that we already know sufficient, not only to stimulate enquiry, but at once to admit of useful practical application. The facts upon which such knowledge is founded address themselves to the daily experience of all, and would long since have been refuted by evidence equally palpable and opposing, were not truth their immutable foundation. And though many difficulties surround the exact appreciation of cerebral development, and many circumstances interfere with functional manifestation, yet it must be admitted that obstacles to the application of truth are not to be regarded in the light of objections to its reality, and which, in the instance we are now considering, we ought, from the very nature of the structure and functions of the brain, *à priori,* to have anticipated.

The very term of "voluntary functions," implies control over their activity, distinguishing them from the operations of organic life ; we cannot, therefore, expect the same correspondence between organ and function as exists in those acts necessary for the immediate preservation of life. The *variety* also of our mental and moral faculties, and the different kind of *food* by which their activity is sustained, contrasted with the innumerable changes in the circumstances of each individual, would lead us to infer that the cerebral functions would often be very irregularly excited, and, upon ordinary occa-

sions, only partially active. The influence also of *education* is such, that no safe conclusions as to the positive activity of different powers can be correctly inferred, without having regard to the modifications which exercise has induced; and, in addition to this, if we consider the *motives* which influence us to cultivate or repress individual faculties, the restraint which the habits of civilized society impose, and the insufficiency of the circumstances by which the great majority are surrounded to elicit more than a very partial exhibition of the mind, we cannot be surprised if the effect to determine the character from the physical conformation of the skull, should, in many instances, appear to the superficial observer to be incorrect and fallacious. As a general rule, it is not to be expected that we shall ever be able to ascertain with precision, either the deeds or particular thoughts of mankind, but we can rationally expect to discover the inherent capabilities and tendencies of the mind, because if we know the organs of individual powers, or of different forms of thought and feeling, we may safely infer that the tendency to certain functional activities exists, however these may be curbed by restraining influences from without, or rendered almost passive by neglect or deficient opportunity. It must not either be forgotten that mental acts are not so easily analysed as other of our bodily functions, and the discovery of what is or what is not a primitive power, or what form of thought is associated with a particular portion of the brain, can only be accomplished by extreme comparative observations.

Conclusions founded upon cerebral development

must also be modified by the presence of those conditions expressed by the term "temperament," conditions which indisputably affect both the amount and energy of the action of all our organs, and whose influence we have only approximative means of estimating. It is also clearly ascertained that the complete development of the brain is not accomplished until adult age, that different parts of the brain are perfected at different periods of life, and that the cerebral substance undergoes other changes than mere augmentation or diminution in *volume*. It is equally a fact that in old age the alterations in the size of the brain are not always indicated by corresponding variations in the skull, and that the osseous envelope sometimes ceases to maintain its exact relations with the cerebrum. The appreciation of form and volume in cases of very equal or moderate development, is also a matter of considerable difficulty, and may not furnish absolutely identical conclusions to different observers; but supposing this latter obstacle to exist to a much greater extent than it really does, yet if the locality of our organs can be determined in instances of exaggerated or very deficient development, we may safely admit the principle, if we cannot demonstrate the fact, that "*extremis probatis intermedia vera sunt.*" Notwithstanding, however, the difficulties we have now enumerated, it is beyond contradiction that the leading traits of individual character *have been* correctly inferred from the examination of the skull in many thousands of instances; that these experiments are being daily made by individuals whose probity and whose

science we cannot for a moment call in question; and their united observations are far more uniform and accordant than those we can adduce in favour of any other contested physiological question. Different countries have been traversed; prisons, lunatic asylums, have been visited, and they have all confirmed the grand and leading fact that the qualities of the mind may be inferred from the examination of the head, and, let it be recollected, that although the facts are such as may be verified or confirmed by any intelligent observer, yet there is no instance of any individual pursuing the same series of observations and arriving at contradictory results. That differences of opinion have arisen as to the nature and seat of particular powers, it would be folly to conceal; but the leading principles and the great majority of the facts which Gall and Spurzheim accumulated, have only been additionally strengthened by succeeding enquirers, and to refuse our assent to the truth of these facts because they either baffle our comprehension, refute our theories, or because their verification is difficult, is as irrational as denying the light of the sun because we discover dark spots upon the surface, or refusing to Napoleon the title of conqueror because the whole world had not yielded to his dominion. It is important to remember that no system of mental philosophy but the one founded upon physical examination, ever before admitted of practical application; and that no one previously pretended, by any system whatever, to determine the mental qualities of different individuals in the manner and to the extent which is now daily effected, and if the

effort be successful, the principles by which the judgment is directed *must be founded on truth,* or we are driven to the alternative of ascribing to chance, results which have hitherto baffled the highest efforts of philosophy to attain.

We have already remarked that the theory of mind evolved by the investigations we have been alluding to, is the most comprehensive and intelligible of any we possess; and when we reflect that it was gradually constructed by observers at different times and in widely distant localities, and that the materials were derived from positive observation, we possess a guarantee of its truth, and a power of testing its reality, which have ever been wanting in previous metaphysical systems.

In concluding this part of our subject, we would remark, that if an individual submitting his head for examination to a perfect stranger, can receive information respecting himself, which he acknowledges to be correct, and if this experiment can be repeated an indefinite number of times, it is idle to deny the truth or value of the method employed, and absurd to suppose that it can have any other data than positive facts for its support; and yet, strange to say, the discovery of the function of a single nervous filament, seems to excite more interest and controversy among the majority of medical observers, than the ascertaining the functions of the brain; and those who have devoted their lives and talents to what is incomparably the most important and difficult of all physiological problems, have too frequently only encountered ridicule or opposition, academic condemnation, and

scholastic contempt. Our estimate of effort is not always proportioned to the value of the object which it seeks to attain, and our respect and admiration for a time are often withheld from those whose labours have most tended to advance the best interests of mankind. The period, however, never fails to arrive, sooner or later, when public opinion acknowledges the force of truth; and we believe a far higher rank will be conceded to those who have so successfully laboured to advance our cerebral physiology, than has hitherto been their good fortune to secure.

We cannot conclude these very imperfect remarks without adverting to some of the objections which have been repeatedly urged by many pious and learned individuals against the study of mental phenomena in connexion with the brain. By far the most important of which we consider to be the "evil tendency" of such pursuits; it being asserted that they lead inevitably to *materialism and fatalism*. In reference to this serious allegation we would advise the prior inquiry—are the facts true? If they are true, and yet the tendency be necessarily evil, then we must cease to investigate the works of God, lest we should find some flaw in his perfections; we must forbear to employ the faculties with which he has mercifully entrusted us, for fear we should make discoveries at variance with his revealed character; lest man's limited investigations, in fact, should disclose some contradictions in the acts of his Creator. The truth is, that in our pride we dare to theorise upon what we should be content simply to acknowledge as a fact, and we examine nature too often to pamper our

poor conceits, and to bolster up our vain imaginings; we cling to opinions as if they were absolute truths, and fortify them with evidence which more extended information would have proved directly adverse to our conclusions. We can only pity the man who can contemplate the works of God, and rob them of their Author; and it is most absurd to suppose that the detailed examination of the natural world can lead to inferences hostile to those which a more superficial inspection seldom fails to inspire. Such a result appears just as rational as the conduct of an individual would be, who, after examining a piece of complicated machinery, watching its harmoniously adjusted movements, and admiring the beautiful coherence of its parts, should gradually lose sight of the intelligent agent by whom it was constructed, and infer that it was self-existent!

That phrenology, however, is susceptible, like every other branch of human knowledge, of abuse, we willingly, and from painful experience, admit; and we do not hesitate to assert that by some of its ablest expounders the applications of the science have been carried beyond their legitimate bounds, and that the facts have been too often interpreted to the exclusion and to the prejudice of revealed truth. It has also always appeared to us that the connection established between individual portions of the brain and particular mental faculties, does not involve that addition to our *real* knowledge of the nature and of the laws of mental and moral phenomena which some able writers seem to imply, since it must be admitted that much general knowledge had been previously acquired, and that we are still

restricted to the study of the *instrument* of the mind *alone*, of which we know nothing beyond some of its grosser modifications, and are wholly ignorant of the nature, and but very imperfectly acquainted with the modes of acting, of the mind itself; our analysis of the functions of the latter being throughout incomplete, and in many of the details most unsatisfactory. Much flimsy and superficial philosophising has also, we believe, resulted from the popular phraseology of the science, and that to regard the system in its present form as a complete elucidation of our moral and intellectual machinery, and to contemplate its progress and diffusion as the means of man's future regeneration, is to mistake a very small part of the problem for the whole, and to encourage hopes directly at variance with the statements of Revelation. But while we thus deprecate all hasty and intemperate applications of the facts of phrenology, we are far from being insensible of their great scientific and practical value, and cannot for a moment admit that they can be legitimately charged with leading either to materialism or fatalism. Matter, in all its forms and combinations, is but the instrument of its Creator's will, and however mysterious the function it may be destined to discharge, it is never more than a passive agent in the hands of Omnipotent Wisdom, and cannot, without gross absurdity, be supposed to possess a single independent power or property.

In the first place, the phenomena of the inorganic world cannot be regarded as the result of the inherent properties of the different substances by which they are manifested. What is gravitation

but a power to which the material universe is subject, and the particular effects of which are modified by the nature of the instrument on which it acts? What are cohesion, affinity, repulsion, but terms expressive of agencies distinct from all ponderable matter, and on the influence of which the active properties of the latter are immediately depending? Of what infinite modifications is not the atomic universe susceptible, when exposed to electric, magnetic, or galvanic influences; in short, it is evidently nothing more than a vast aggregate of machines, capable of no acts or changes but what are impressed from without, and special in no other respect than as presenting peculiar combinations through which these unseen forces manifest their presence. On what these powers themselves depend, we have no means of ascertaining, nor is it important to enquire; for our present purpose it is sufficient to prove that the active phenomena of inorganic matter are to be ascribed to agencies distinct from the matter itself.

Now it is a remarkable circumstance that the material selected for our brain is composed of atoms in every respect identical with those which enter into the constitution of innumerable other substances, and that their only possible peculiarity, as portions of the brain, consists in their mode of aggregation. It is not, therefore, absurd to suppose that these atoms, in virtue of this peculiar arrangement, should acquire the marvellous and inscrutable properties of mind, or that they should be anything more than as in the inorganic world, the mere instruments of the unseen and intelligent principle;

and if we cannot suppose that mental phenomena are the simple consequences of the *relative position* of the particles of matter, an hypothesis, we presume, no one will uphold, can we with greater plausibility infer that mind is enthroned in the *individual atoms?* Are not these equally compounded with the mass? And shall we admit a republic of many millions of minds, perpetually perishing and renewed, and existing also elsewhere than in the brain? The mere statement of such a scheme is its best refutation, for how could we ever plausibly account for the phenomena of personal identity, memory, conscience, and, in fact, all moral emotions? Are we to admit that each new atomic visitor is informed by his predecessor of the transactions of the past, and thus voluntarily becomes responsible for their various virtues or misdeeds? Indeed the "moral responsibility" of *atom* is an association of ideas which can only excite a smile, or a feeling of commiseration for the perverted reason which can, even for a brief moment, be the victim of such an utterly irrational supposition. The fact is, that finding the perfection of mind and body go together, we begin to suspect that the phenomena of sensibility and perception are in some way or other to be ascribed to the atomic structure of animals, and lose sight of those other facts which prove the extreme shallowness and fallacy of such a conjecture. It has been well observed, that if mind is an atomic function, it is an atomic *insanity,* for the acts of intelligent beings are in direct opposition to genuine atomic forces, perpetually creating what nature never executes, and moulding unnatural forms by

the magic exercise of the will; while all philosophy demonstrates more and more that the phenomena of matter are purely mechanical, mathematically circumscribed, and to be referred to the laws of motion and polarization.

To talk, as some of our teachers unfortunately do talk, of the brain "secreting thought," or of its being the "organ of the mind," in the *same sense* as we understand the lungs to be the organ of respiration, is to violate all scientific accuracy of expression, to involve fundamental error, and to confound things which are essentially distinct. Mental phenomena do not in the slightest degree resemble the modes of acting of our other organs, —always excepting those evident effects resulting from the admitted influence of matter upon mind,— and cannot, with the least pretence to probability, be classified with them.

The assumption of the different portions of the brain *originating* their respective functions, would be irreconcilable with strict phrenological principles, since such organ must then be compounded of all the other organs, distinguished merely by an excess in some individual faculty, in the direction of which it has a constant tendency itself to act, and to induce its neighbours to follow its example. Unless we admit this, we cannot rationally explain the mutual influence of the different powers, the modes of combination of our faculties; for how can they modify or control each other, unless they are mutually conscious of each others dispositions and intentions, and endowed with the power of mutual communication, and of imparting their wishes or commands

in a manner which the object of their indignation or solicitude can comprehend? For conscientiousness to restrain acquisitiveness, or benevolence destructiveness, they must surely be capable of appreciating each other's modes of acting or feeling, of perceiving the objects of their activity, of judging how far those objects are justifiable or otherwise, or no possible reason for their interference would exist; and to imagine such a colloquial intercourse to take place among the differently organised beings which each cerebral organ would thus represent, is quite as adverse to every principle of cerebral physiology, as it is a glaring infringement of all personal experience on the subject. Another argument may be founded upon the fact that our sensorium is incompetent to express our nobler conceptions! Who does not feel within him a power of discovering a far greater breadth of truth, and of experiencing emotions far more strongly than his organic confinements permit? Who is not sensible that all organic invention, even language itself, is an apparatus from which feeling often shrinks as from an amputating instrument? The intellectual consideration of an emotion, as has been forcibly observed, hungers it to death, and to attempt its description is to undertake its funeral! Our deepest and strongest feelings operate like a freezing mixture on the body, which never indicates the mind's grandeur so much as when reduced to living marble! And are we not conscious of yearnings of the soul, and of looking forward to a state when we shall be disenthralled from those corporeal disabilities by which the full development of our mental and moral powers is now

impeded? When, in short, a spiritual shall replace a carnal body? And can matter thus contemplate with pleasure and joyous anticipation the period of its own destruction? Nothing but contradiction upon contradiction can await the materialist wherever he may direct his gaze, and to no hypothesis of man's restless mind can we more aptly apply the words of the "Wise Man," that all is vanity and vexation of spirit. The system of fatalism equally sins against the dictates of conscience, and the evidence of facts. Phrenology, however, is certainly not justly chargeable with any such consequence, since it does not create, but merely points out in a clearer and more definite manner, those individual peculiarities, the reality of which the most superficial observer must admit; and if it demonstrates their coincidence with certain cerebral conformation, we surely have no right thence to deduce the inference of man being a mere machine. The premises and conclusions have no logical connection whatever, and facts, far more certainly attested, prove the very reverse. The whole volume of Revelation is founded upon one moral responsibility, and it is, indeed, a striking proof of our moral aberration and mental feebleness, when the imperfect results of phrenological observation can weaken our belief in those all-important truths which ages have only sanctified and confirmed, and which repose upon evidence immeasurably superior to any which can possibly accredit the scanty materials of man's feeble philosophising. Instead of being anxious to disassociate mind from matter, and at once to reject every system which is founded upon

such an admission, we should rather freely admit their intimate and close connexion; for a contrary hypothesis would furnish the infidel with the strongest possible argument against the very truths we are so solicitous to maintain. He could prove unanswerably that mind had its infancy, adult age, and decrepitude; that, like the body, it was liable to disease, and ceased with the dissolution of the latter; in short, that its manifestations were, in many respects, analogous to the workings of functions avowedly temporary in their nature, and that, like them, it was destined to die and be no more. To these assertions no satisfactory reply can be offered, when meeting the objector on his own ground, except the admitted dependence of the mind on the corporeal conditions, which at once furnishes a rational solution of what must otherwise often frighten the timid and stagger the wavering. And, lastly, let it never be forgotten, that God's designs are not obstructed by human opinions, and that our ideas of things do not in the slightest degree alter the things themselves. The evidence of a future life, of the immortality of the soul, of man's responsibility and free agency, rest not merely upon general consciousness and conviction, but upon direct Revelation; and to suppose that human science can in any degree interfere with God's intentions, is to place ourselves on a par with the Deity himself, and madly to endeavour to judge His ways at the tribunal of human reason.

We trifle with our dearest truths, and weaken their vast importance on the minds of others, when we talk of their being endangered, or in any way

affected, by the researches or suppositions of the profoundest philosophers. Real philosophy consists in the discovery of truth for its own sake; in seeking to amalgamate it with what God has revealed of himself; and where this is beyond our power, as often, very often, it is, in attributing our failure to the feebleness of our intellect, and not to the discordancy of facts: resting satisfied with the conviction, that when the veil of human ignorance shall be lifted up, and the circle of our vision be enlarged, we shall then behold the Creator's glory manifested in his works and confess that "in wisdom he has made them *all*."

There are others who advance numerous *theoretical* objections against the *probability* of an organ like the brain manifesting mind; of the difficulty of *conceiving* that small portions of an organ so apparently homogeneous in structure, should be the instrument of such varied manifestations; of the impossibility of detecting the form of the brain by examination of the skull, and many other difficulties of a similar nature. To all such objections we would answer, that the evidence in favour of the physiology of the brain, is neither derived from probabilities or the possible conceptions of any individual, but from accurate and extensive observation; that its truth or fallacy is utterly independent of its being in accordance or at variance with any notions we may happen to entertain, and can only be rationally admitted or rejected by counter evidence similar in character to that on which it was originally founded. The most ardent believer in its truth freely admits that probability was greatly

against what facts have demonstrated, and that their own conceptions have been falsified by the result: but might not the same admission be made for every organ of the body, for every flower of the field? all of which equally lay man's pride in the dust, and prove the shallowness of his reason. But if the knowledge we possess of the brain, however inexplicable, coalesces with the evidence of observation in every other department of the organized world, and harmonizes with the laws which regulate the manifestations of organs whose functions are more easily examined, we possess, independently of direct observation, one of the strongest evidences of its truth which man's intellect is capable of estimating.

It has been argued by a most distinguished member of this Association, that the comparative anatomy of the nervous system in non-vertebrated animals, many of which evidently possess various powers or instincts common to the higher orders, is unfavourable to the truth of the conclusions obtained with regard to man. In the first place, facts acccumulated in one department of nature can never be invalidated by facts observed in another; and, secondly, the modifications in form, structure, and functions, not only as respects the brain, but every other organ of the body when traced through the descending scale of organization, are so numerous and important, that we cannot rationally expect to trace a close analogy, except in beings not widely separated in their conformation from each other.

To compare the insect's brain with man's might

at once be expected to be negative in its results, so dissimilar are the beings contrasted ; and to argue that because both have instinct common to each other, and no common organization can be discovered by which these are manifested, that therefore the supposed function of particular portions of the brain in man are not established, is as rational as the assertion that respiration is not effected by the human lungs, because no such organs can be discovered in many animals inferior to ourselves, though the function itself is undoubtedly common to all.

We see innumerable contrivances in nature for the accomplishment of the same ends, and why should we be surprised if the nervous system should be affected by those modifying influences by which its form and bulk are adapted to animals so different in their habits and requirements from ourselves? That it is so modified, no doubt can possibly be entertained, and the knowledge of this should make us very cautious in drawing conclusions from its physical arrangement in one department of animal life, as to what it may be in another. Still it should not be forgotten, that there is a greater unity of type in the nervous system than in any other, but the differences in the degree of intensity of its functions are such as often to render any attempt at comparison most uncertain and fallacious. It is, however, but justice to remark, that in those animals whose structure closely corresponds to that of man, and whose functions we are capable of contrasting with our own, observation has confirmed in all the leading particulars, conclusions

which were originally deduced from the examination of man alone. The fact, therefore, of our not being able to follow out the physiology of the brain in *every* gradation of the scale, is only what we might theoretically have anticipated, and cannot be regarded as in any degree adverse to results which have been founded upon the examination of more limited but more comparable materials. As to the objection, that the physical constitution of animals is essentially different from our own, and therefore that no comparison is possible, we can only reply that such an assertion is gratuitous in the highest degree, and that whether we regard their organization or their acts, there is as much reason to admit the analogy of both to what we observe and find in ourselves, as to consider the organs and functions of respiration and digestion essentially the same, however modified they may be to suit the varying wants and conditions of the individual.

By other objectors a general assent is given to the fact that the brain is the organ of the mind, and some will go so far as to admit that different regions of the head correspond to the intellect, moral feelings, and propensities; but yet deny the truth of what they are pleased to term the "details" of the science, forgetting that those very details were established by observation before the inferences to which they deign to affix their assent could have been deduced, and that the determination of the functions of particular regions depended on the prior analysis of their individual parts. The same class of objectors denounce all practical application of our knowledge, supposing it to be theoretically

true; equally unmindful that practice was the original source of our information, the theory of mind, and of the functions of the brain, wholly resulting from reiterated observation, made by different observers at different times; if, therefore, the investigation is not susceptible of becoming practical, the whole science of cerebral physiology deserves no other name than a plausible theory or ingenious speculation.

A still less reflective class of objectors deride the subject because it is opposed by names deservedly respected in the ranks of science, and has not yet received the sanction of the schools. To all such we would reply, that popularity is no test of truth, and that the latter has never been popular until man's interests or prejudices have been enlisted in its behalf. Whatever is feeble is always plausible, because it favours mental indolence; and whatever is indifferent and avoids collision with or fortifies our preconceived notions, soon forms part of our opinions, and gains an easy entrance into the mind. But knowledge which requires reflection to be understood, which interferes with the conclusions we may have formed, which sets aside the systems we have embraced, which convicts us of error, and involves practical consequences, is, of necessity, slow in its progress, and ultimately adopted rather from the evidence of its effect than from a careful examination of the principles on which it is founded. Such a fate might naturally have been expected for cerebral physiology, directly interfering, as it does, with the previous conclusions of the physiologist and the metaphysician; yet, notwithstanding the numerous difficulties which have impeded its general

reception, such is the force of truth and the high interest of the investigation, that already more societies exist in Great Britain, America, and upon the Continent, for its special prosecution, than for that of any other science whatever. Nor is the support of great names wanting for those who pin their faith upon authority rather than upon facts; but to such we can no longer address ourselves, caring little for the assent or dissent of those whose belief amounts to little more than imitation, whose love of truth does not extend beyond the trappings with which it may be decked, and who would claim fellowship with error if only patronised by rank and reputation.

We must apologise for the feebleness and unexpected length of the preceding observations, sincerely trusting that they will not wholly fail in satisfying the mind, of the rationality and general truth of the present system of cerebral physiology, while they may tend to shield it from those objections which have too frequently interfered with its dispassionate examination, and have occasionally converted it into an instrument of evil. We should not have insisted upon the much hackneyed questions of materialism and fatalism, had we not been anxious to dissolve those chains of distressing doubt and perplexity which we know the unguarded statements of phrenologists have fastened round the minds of some to whom we have the privilege of being united by the ties of friendship.

ARTICLE XI.

REMARKS ON THE USE OF THE FUCUS ESCULENTUS AS A BOUGIE.

BY THOMAS J. AITKIN, M.D.,
Poole, Dorsetshire.

The Fucus esculentus (tangle), which I beg to submit to the attention of the Association, is found abundantly on several of our rocky coasts; its stem varies in length from a few inches to several feet, and from the thickness of a quill to more than an inch; it possesses the most perfect smoothness, great tenacity, and, when of proper age, a sufficient degree of flexibility, combined with the necessary firmness. Several years ago I was induced to employ it as a rectum bougie, and I have found it for the purpose of dilatation, in cases of stricture, much superior to any artficial instrument; and even as a sound for that canal, it possesses some advantages.

The case in which I first used it, presented some features which may be deemed deserving of notice, as shewing the very insidious manner in which stricture of the rectum commences, the variety of sympathies that are called forth during its progress, and the great liability there is in many cases to mistake the true causes of the symptoms that present themselves.

Mrs. ——, aged 24, has been married for four years, never having been pregnant. About a year before her marriage she had a violent inflammation of her bowels, which was subdued by copious blood-letting, turpentine enemata, and other active measures. After this she does not recollect having enjoyed the same health she did previously, but became subject to various painful affections of the bowels, irregularity of appetite, frequent flushings, cramps of the stomach, thighs, and legs; these symptoms were considered by her medical attendant as arising from some derangement of the stomach, and treated accordingly. After having continued the use of a variety of bitters and other stomachics, she had recourse to another practitioner, who declared it to be his opinion that she was labouring under chronic inflammation of the liver, and prescribed for her a course of blue pill. This treatment was equally unsuccessful, the pain becoming more severe, the general langnor and debility greater, with frequent attacks of hot febrile symptoms. Having now been married for three years and a half, an accoucheur of eminence was consulted. After strict examination of the uterine organs, he gave it as his opinion that she was labouring under hypertrophy of the womb, though she menstruated regularly. He placed her under iodine treatment. Having used for some time the tincture of the binioduret of potassium, she became gradually weaker and emaciated, had frequent spasmodic attacks, and was exeedingly liable to fainting on using the slightest exertion.

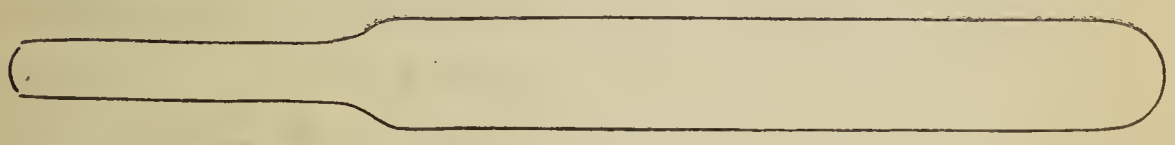
In November, 1826, I was consulted respecting

her, and found her labouring under great prostration of strength, subject to almost nightly attacks of cramps at the stomach, and most violent spasms of the lower extremities ; her appetite was very irregular, occasionally voracious, and sometimes altogether abolished, and coming on most capriciously, even in the middle of the night, being frequently so urgent as to be altogether irresistible. The alvine dejecta had all along been thin, mixed with hard scybalæ, and discharged with pain and difficulty. The spasmodic paroxysm usually occurred on becoming warm in bed, and was accompanied with such agonising pain as frequently to produce syncope ; after recovering from which, she remained sometimes for an hour in a kind of hysterical insensibility. The spasm usually affected not more than two or three muscles at a time ; frequently the semi-tendinosus, the semi-membranosus, and the biceps ; sometimes it would in an instant be transferred to antagonist ones, as to the rectus, vasti, and cruralis. Various anti-spasmodics were had recourse to, both applied externally and exhibited internally. I was led to suspect that the whole train of phenomena in this case was more or less dependant on the condition of the lower part of the intestinal canal. I succeeded, not without much persuasion, in inducing the lady to submit to the examination of the rectum. On attempting to introduce a rectum sound, it was with great difficulty carried up three inches, when it met with insuperable resistance, and immediately the spasmodic paroxysm was brought on with unusual violence. Next day one of the largest sized male

urethra bougies was tried; this passed easily to the extent of five inches, where it was arrested. After repeated trials and failures, a No. 10 male urethra bougie was passed up over the top of the sacrum to the extent of eight inches, and therefore into the sygmoid flexure of the colon. The impediment was distinctly ascertained to be placed between six and seven inches from the external orifice.

Having now determined the existence of considerable mechanical obstruction in the intestine, and the presence of important structural derangement in the rectum, and recollecting the close connection established between various parts through the medium of the hypogastric plexus, the ganglion impar, and the terminal fibres of the spinal marrow, I entertained no doubt that all this lady's sufferings arose from this cause; accordingly, every measure was adopted that was thought adequate, either to the alleviation or removal of this condition. With these views, every night on retiring to bed an enema of very thin gruel and sweet oil was thrown up the bowels through an elastic gum male catheter, as otherwise the stricture became irritated. The bowels were thus decidedly relieved with much greater facility than she had experienced for a great length of time, and one of the chief causes of irritation considerably obviated. Bedtime was selected for this purpose, in order, if possible, to forestal the usual spasmodic attack; and in a short time we in a great measure succeeded in obtaining this desirable object. In the morning, elastic gum bougies were introduced, and retained for an hour, or longer if possible; but very frequently it became neces-

sary to withdraw them in a much shorter time. The size selected to commence with was No. 10, male urethra bougie. By perseverance in this practice for some weeks, a bougie of half an inch in diameter was admitted. She now began to complain of pain, and much uneasiness from the stiffness of the instrument and from distention of the sphincter. With the view of obviating this I sent to London, and got made a set of bougies of this form



The small handle being of whale-bone, and the body of the instrument of the substance of the elastic gum bougie. On the complete introduction of this instrument, the sphincter contracted on the small handle, and the bougie was retained with much less inconvenience, and for a longer time. From this period she slowly recovered from the severe sufferings she had so long laboured under, and her health and strength became gradually established.

On walking along the beach one day at Leith with this lady, she pointed out to me a piece of tangle, and asked me "if that was not very like a bougie?" I took it up, and immediately saw that it had all the requisites of that instrument in an eminent degree. Next morning it was tried instead of the expensive artificial article, and gave so much satisfaction both to the lady and myself, that the London instruments, which had cost half a guinea each, were condemned, nor would she

suffer any other than the tangle to be employed during the rest of the cure, which in a short time after was completely effected. Since first using the stem of the fucus for this purpose, I have in several cases employed it with uniform satisfaction ; and I believe that every one acquainted with the rectum bougies in general use, and the treatment of the serious class of complaints for which they are employed, will perceive the great superiority that this cheap and easily procurable article possesses.

ARTICLE XII.

OBSERVATIONS

ON THE

PHYSIOLOGY AND FUNCTION OF THE LIVER.

BY JAMES Mc CABE, M.D.,

Physician to the Dispensary and Casualty Hospital, Cheltenham.

At a very early period in the history of medicine, the liver appears to have attracted the attention of the anatomist and physiologist. Its great bulk, as compared with the other organs of the human body, and the peculiarity of the fluid which it separates from the blood, necessarily directed attention to its structure and function, and although the knife of the anatomist has since laid open its most intimate structure, and injections have reached the most complicated parts of its organisation, the physiology of the liver still remains an unsettled subject of philosophical enquiry.

That the separation of the bile from the blood is an important function in the human economy, must be inferred from the great size and complicated structure of the organ destined for its separation; but whether the fluid thus elaborately separated from the blood, be removed from the system as excrementitious and injurious to the health of the individual, or whether it be secreted for the ulterior and final purpose of promoting and perfecting the

process of assimilation, is the question not yet satisfactorily settled. That the bile is intended to promote or in some way to assist the process of assimilation, appears to have been the opinion of the earlier physiologists, and the treatment of all diseases connected with the liver has been hitherto founded on this view of its function ; it must, therefore, be evident that an enquiry into the use or final purpose of the bile in the human economy, is not merely a subject of speculative interest, but may be one of practical utility, for if the liver be merely an excretory organ, intended to remove from the system an excrementitious fluid, this view of its function would probably lead to an alteration, or, at least, some modification in the treatment of its diseases.

It is difficult to institute, at least I find it difficult to devise, any direct experiments which would appear calculated to throw light upon this enquiry. Were it possible, by way of experiment, to remove the liver or tie up its vessels in a living subject, consistently with the safety of the individual, it would probably prove nothing towards settling the question ; for in jaundice, where the function of the liver is superseded, or at least where the bile ceases to make its way into the intestinal tube, it is vicariously discharged by the kidneys, or retained in capillary vessels, which ordinarily contain only a colourless fluid, and the low pulse and great debility which we practically know attend upon jaundice, may, with as much probability, be attributed to the imperfect removal from the system of an excrementitious fluid, as to the disordered state of the function

of digestion, usually attributed to the absence of bile from the alimentary canal, and indicated by the appearance of clay-coloured fœces. Although the symptoms attending jaundice may thus be explained consistently with either physiological view of the question, the fact of the vicarious discharge of bile by the kidneys, is, I think, calculated to lead to the opinion that the excretion of that fluid from the circulating mass is the final function and purpose of the liver.

The "*atra bilis*" of the ancient physicians was supposed to be the cause of a numerous class of diseases; hypochondriasis and the other varieties and modifications of insanity were generally attributed to this cause. Aretœus, in his chapter on "Melancholia," quotes Homer to show that the poet attributed to the influence of "*atra bilis*" the first impassioned speech of Agamemnon in the *Iliad*, by which he roused the anger of Achilles, and gave to the poet the subject of the poem.

We need not, however, refer to the older physicians for the characteristic appearances which denote the accumulation or congestion of bile in the system. The yellow and suffused eye, the sallow complexion, the squalid and sickly aspect, and the dispirited and dissatisfied air, sufficiently express its physical effects on the body and its outward movements; while the morbid irritability of mind, and gloomy apprehensions which generally accompany this state, sufficiently explain its mental pathology. Now as all, or at least most of the effects here mentioned, are known to follow the imperfect separation of bile from the system, it

would appear to act as a poison on the general mass of fluids when not expelled through the natural channels. It would, therefore, appear to be a more legitimate inference, that the separation and expulsion from the circulating system of a noxious and excrementitious fluid was the final physiological function of the liver, than that the bile, which produces such deleterious effects, should be considered a secretion intended to promote the function of digestion. If the physiological function of the liver consisted merely in separating from the blood a fluid intended to promote the process of digestion, that process ought to be the most perfect in persons in whom bile abounds, or, in other words, in persons of a bilious habit of body, and ought also to be promoted by meats and condiments which are known to occasion a redundancy of bile, such however is not the case. We know that after a course of high living symptoms and sensations, which by universal consent are denominated bilious, present themselves, consisting of nausea and other symptoms of repletion and indigestion, and we know, practically, that a course of moderate aperients, calculated to remove the redundant bile, together with enforcing a less stimulating diet, are the means best calculated to restore the healthy function of digestion.

It would be easy to give and also to multiply instances showing that bile, instead of promoting, injures the digestive powers; the effects of the climate of India on European constitutions afford ample illustration. The habits of Europeans in India, with regard to diet, are habits of high living; curries and other high-seasoned dishes, with rich

and stimulating sauces, constitute their every-day system of living. Such a diet, and in such a climate, necessarily occasions a redundancy of bile, and if that fluid were calculated to promote the function of digestion, we should have no dyspeptics from our Indian empire. Experience, however, shows us that a residence of some years in the climate of the East, and a conformity to the mode of living there among Europeans, are too generally followed by habitual dyspepsia, and by that whole train of symptoms which we have already seen to be the result of the imperfect separation of bile from the blood, or of its retention in the circulating system. If, on the other hand, we consider the liver an excretory organ, intended to remove from the blood an excrementitious fluid, we can more readily comprehend from this view of its functions, the diseases with which it is connected. If the bile be merely an excrementitious fluid, every cause of its detention in the system, and every kind of diet that generates it in excess, would be likely to injure the health of the individual; universal experience accords with this theoretical deduction, for an excess of bile or its retention in the system, is a cause or an accompaniment of most diseases.

As the separation of the bile from the blood is essential to health, so also is it essential that the organ by which it is separated should be in a condition to perform its function. It is a law of the human economy, that every function is liable to disorder, and every organ liable to disease, in proportion as they have been excited or over-exerted. In warm climates the liver and the skin are the

organs most excited, and are, consequently, the organs most subject to disease; while in colder climates the urinary organs are those most liable to disease, owing to the greater activity of the kidneys, by which a greater proportion of the watery and saline parts of the blood is eliminated in cold than in warmer regions. It follows from these views of the human economy, that in order to preserve the liver in a healthy state, it ought not to have too much to do, in other words, that the quantity of food taken should be sufficient to afford sustenance to the system, but should not, from its quality or quantity, generate bile in excess. Where such a regimen is observed, and regular exercise taken, we seldom meet with disease of the liver, so that here also observation and experience accord with theoretical deduction.

That the fluid separated from the blood by the kidneys is excrementitious, and not intended to answer any further or final purpose in the human economy, appears to be generally admitted. The analogy of the kidneys would therefore appear to be an argument in favour of the opinion that the liver is an excretory organ. The organs by which both the bile and the urine are separated from the blood, are favourably placed in the human body for the elimination of noxious matters. The nearly straight course of the ureters from the kidneys to the bladder, favours, by gravitation, the descent of the urine from the excreting to the containing organ, and the manner in which the ureters enter the bladder, prevents the regurgitation of its contents, and completely insulates the urine till its final

expulsion through the urethra. A further analogy seems to exist between the urinary and the biliary organs. The gall-bladder appears to answer, in some measure, the purpose of a reservoir for containing the bile till its final expulsion through the alimentary tube, in the same way as the urine is retained in the urinary bladder till its expulsion through the channel of the urethra. The occasional formation of biliary as well as of urinary calculi, shows that an analogy exists also between their diseases. Biliary calculi or gall-stones are occasionally found in the gall-bladder, which, in such cases, is found generally to be much enlarged. The writer extracted from the gall-bladder, during the *post mortem* examination of a soldier, eighteen gall-stones. They were of various sizes and figures, but a few of the largest were as large as a common sized playing marble, of a globular figure, with smooth and polished surfaces. The bile thus pent up in the gall-bladder, in the form of gall-stones, appears to exert no injurious effects on the general system; it has been already separated from the blood, and remains insulated in the gall-bladder, as in a reservoir. Like urinary calculi, gall-stones produce whatever inconvenience they occasion, from their mechanical effect, producing local or constitutional irritation, and not by the re-absorption of their elementary principles into the general circulation.

Analogy, therefore, as well as inference, favours the opinion that the liver is an excretory organ; keeping this in view in the treatment of biliary diseases, it is obvious that our remedies should be directed to promote the expulsion of bile from the

system as a noxious and excrementitious fluid, and that the medicines so frequently administered with the view, as it is said, of improving the quality of the bile, must be useless, and may be frequently injurious, by leading to a temporizing system of treatment, instead of active and decided remedies.

The great success which is found to attend the exhibition of aperient medicines in fevers and other diseases, accompanied by derangement of the biliary system, may probably be, in a great measure, attributed to their effect of removing from the system accumulations of bile. That formidable scourge of nations, the blue cholera, which, as its name implies, is a biliary disease, is known to have been more fatal in its ravages in France than in England during its late epidemic visitation. May not this difference in its relative mortality in the two countries be traced to the difference of popular habits and of medical opinion in France and England? In France a prejudice exists in the public mind, and which extends even to the medical profession, against the use of aperient medicines; while in England they are freely prescribed in most diseases by the medical faculty, particularly since the publication of Dr. Hamilton's work on purgative medicines directed the attention of the profession to the subject. The consumption of Morrison's pills, and of other quack medicines, most of which are aperient, sufficiently evince in that respect the habits and prejudices of the British public. But although aperient medicines, judiciously administered, will frequently remove feelings of despondency and of gloomy apprehension, and restore the individual

to comparative comfort and happiness, yet when frequently had recourse to, they at length fail to produce so beneficial an effect. It is to air and exercise, therefore, that we must generally look for preventing morbid accumulations of bile in the system. Atmospheric pressure and muscular exertion greatly contribute to promote the general circulation, and to enable the several organs to separate from the blood those excrementitious particles which, if allowed to remain, might oppress the vital functions. There are many other means besides air and exercise, and the exhibition of aperient medicines, by which the expulsion of bile from the system may be promoted; such as warm bathing, powerful frictions, particularly in the warm bath, but as this paper is only intended to indicate the general principles of treatment of biliary diseases deducible from the physiological function of the liver, it would be inconsistent with this object to enter at present into the details of treatment or remedies.

PART IV.

REPORTS OF INFIRMARIES AND DISPENSARIES.

ARTICLE XIII.

A REPORT OF THE OUT-PATIENTS

ATTENDED

BY F. RYLAND ESQ.,

AT

THE BIRMINGHAM TOWN INFIRMARY,

Between the 25th Dec., 1836, *and the 25th Dec.* 1837.

Table 1.

	Qr. ending March 25.		Qr. ending June 24.		Qr. ending Sep. 29.		Qr. ending Dec. 25.		TOTAL.	
	CASES	DTHS.	CASES	DTHS.	CASES	DTHS.	CASES	DTHS.	CASES	DTHS.
Abortion	...	...	...	...	2	...	2	...	4	...
Abscess	6	...	15	1	14	...	9	...	44	1
Amenorrhœa	...	...	4	...	3	...	10	...	17	...
Anasarca & ascites	5	2	8	2	10	3	9	1	32	8
Aneurism	...	...	...	...	...	...	1	...	1	...
Aphthæ	...	...	3	...	...	...	...	...	3	...
Bronchitis.....	16	...	31	...	16	...	27	...	90	...
.....chronic...	19	3	17	2	11	...	18	2	65	7
Burns and scalds...	4	...	3	...	2	...	11	...	20	...
Cephalalgia	4	...	7	...	5	...	5	...	21	...
Chlorosis	...	...	...	...	1	...	1	...	2	...
Cholera biliosa.....	1	...	...	...	3	...	1	...	5	...
Chorea	...	...	...	...	1	...	...	...	1	...
Constipation..... ...	4	...	13	1	11	...	12	...	40	1
Convulsions	3	...	2	...	2	...	1	1	8	1
Cutaneous diseases	12	...	18	...	27	...	30	...	87	...
Cynanche tonsil. ...	3	...	3	...	4	...	4	...	14	...
..... trachealis	...	...	...	...	...	...	1	1	1	1
Delirium tremens..	...	...	...	...	2	...	..	...	2	...
Dentition	...	...	...	...	1	...	3	1	4	1
Diarrhœa	11	1	7	1	37	1	30	1	85	4
Diseases of bones ..	...	...	3	...	2	...	3	...	8	...
..... eyes ...	2	...	2	...	3	...	4	...	11	...
..... heart...	1	...	2	...	...	...	1	...	4	...
..... joints ..	3	...	3	...	5	...	...	...	11	...
Disordered bowels.	...	...	7	...	...	...	2	...	9	...
Dysentery.....	1	...	1	...	3	...	6	...	11	...
Dyspepsia.....	9	...	26	...	32	...	34	...	101	...
Dysuria	...	...	1	...	...	...	...	...	1	...
Enteritis	...	...	1	...	1	...	...	...	2	...
Epilepsy	1	...	...	...	2	...	1	...	4	...
Epistaxis	...	...	...	...	1	...	...	...	1	...
Erysipelas.....	1	...	2	...	1	...	1	...	5	...
Erythema	...	...	..	...	...	...	1	...	1	...
Fistula in ano	...	...	1	...	...	...	...	...	1	...
Fractures	...	...	1	...	...	...	2	...	3	...
Fungus of antrum..	1	1	...	...	...	...	...	...	1	1
Gastritis chronic ...	1	...	3	...	3	...	5	...	12	...
Gonorrhœa	5	...	5	...	10	...	8	...	28	...

	Qr. ending March 25.		Qr. ending June 24.		Qr. ending Sep. 29.		Qr. ending Dec. 25.		TOTAL.	
	CASES	DTHS.	CASES	DTHS.	CASES	DTHS.	CASES	DTHS.	CASES	DTHS.
Gravel	...	...	1	...	1	...	3	...	5	...
Hæmatemesis	...	...	1	...	...	...	...	...	1	...
Hæmoptysis	1	...	1	...	...	...	2	...	4	...
Hæmorrhoids	2	...	1	...	1	...	2	...	6	...
Hemicrania	...	...	3	...	4	...	8	...	15	...
Hernia	4	...	3	...	4	...	6	...	17	...
..... humoralis ..	1	...	...	...	2	...	2	...	5	...
Herpes	...	..	3	...	...	...	1	...	4	...
Hydrocephalus, ac.	...	...	1	1	1	1	...	...	2	2
Hysteria	3	...	...	...	2	...	3	...	8	...
Icterus	...	...	5	...	2	...	1	...	8	...
Incontin. of urine ..	2	...	...	...	...	...	...	...	2	...
Influenza	177	9	...	...	...	...	...	...	177	9
Laryngitis, chronic	1	...	2	...	...	...	1	...	4	...
Leucorrhœa	1	...	1	...	2	...	...	...	4	...
Lumbago	4	...	8	...	9	...	5	...	26	...
Mania	3	1	3	...	3	...	...	...	9	1
Meningitis	...	...	1	...	...	...	...	...	1	...
Menorrhagia	...	...	1	...	4	...	...	...	5	...
Otitis	...	...	...	...	...	...	1	...	1	...
Paralysis	2	1	2	...	4	...	1	...	9	1
Parotiditis	1	...	...	...	...	...	2	...	3	...
Pericarditis	...	...	1	1	...	...	...	...	1	1
Peritonitis.....	...	...	...	...	...	...	1	...	1	...
..... chronic...	...	...	...	...	1	...	2	...	3	...
..... puerperal	1	...	...	...	1	...	...	...	2	...
Pertussis	1	...	2	...	...	...	...	...	3	...
Phlegmasia dolens	...	...	...	...	1	...	...	...	1	...
Phlogosis	5	...	4	...	9	...	9	...	27	...
Phthisis.....	5	3	5	5	3	3	4	2	17	13
Pleuritis	5	...	3	1	1	...	1	...	10	1
Pleurodynia	8	...	6	...	5	...	7	...	26	...
Pneumonia	...	...	1	...	...	...	...	...	1	...
Podagra.....	1	...	...	...	2	...	...	...	3	...
Prolapsus uteri ...	1	...	1	...	2	...	2	...	6	...
Ptyalism	...	...	1	1	...	...	...	...	1	1
Rheumatism	11	...	24	...	16	...	15	...	66	...
..... chronic	2	...	2	...	5	...	5	...	14	...
Rubeola.....	...	...	1	...	...	...	...	...	1	...
Scarlatina	1	...	3	...	1	...	4	...	9	...
Scrofula.....	2	...	5	...	5	1	...	...	12	1
Stricture of urethra	1	...	...	...	2	...	...	...	3	...
Synochus	11	2	15	1	40	...	46	4	112	7
Syphilis	3	...	6	...	12	...	9	...	30	...
Typhus	...	...	...	...	10	1	4	1	14	2
Ulcers	5	...	13	...	8	...	13	...	39	...
Urticaria	1	...	2	...	6	...	...	...	9	...
Varices	...	...	1	...	3	...	...	...	4	...
Variola	3	...	4	1	7	2	4	1	18	4
Worms, intestinal .	3	...	3	...	7	...	4	...	17	...
Wounds, contusions, &c.	11	...	17	...	14	1	22	...	64	1
Total	396	23	346	18	415	13	433	15	1590	69

TABLE 2.—*Shewing the sex and age of the patients affected with the different diseases.*

	Under 2 years.		Between 2 and 5.		Between 5 and 10.		Between 10 and 20.		Between 20 and 30.		Between 30 and 40.		Between 40 and 50.		Between 50 and 60.		Between 60 and 70.		Between 70 and 80.		Between 80 and 90.		Total.		Total Cases.
	Ma.	Fm.	Ma	Fm.	Ma.	Fm.	Ma.	Fm.	Ma.	Fm.	Ma.	Fm.	Ma.	Fm.	Ma.	Fm.	Ma.	Fm.	Ma.	Fm.	Ma.	Fm.	Male	Fem.	
Abortion	0	0	0	0	0	0	0	1	0	1	0	0	0	2	0	0	0	0	0	0	0	0	0	4	4
Abscess	1	1	4	0	6	0	3	1	2	6	2	9	2	2	2	1	0	0	0	2	0	0	22	22	44
Amenorrhœa	0	0	0	0	0	0	0	10	0	3	0	3	0	1	0	0	0	0	0	0	0	0	0	17	17
Anasarca	0	0	0	0	0	1	0	1	1	2	0	2	3	5	3	4	3	6	0	1	0	0	10	22	32
Aneurism	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	1
Aphthæ	0	0	0	1	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	2	3
Bronchitis.....	10	4	4	2	3	3	2	2	5	8	2	9	5	11	3	7	1	4	4	1	0	0	39	51	90
..... chronic...	0	0	0	0	0	0	0	0	1	0	4	3	8	6	8	8	7	11	0	9	0	0	28	37	65
Burns and scalds...	2	0	1	2	0	1	3	0	4	2	1	1	0	1	1	1	0	0	0	0	0	0	12	8	20
Cephalalgia	0	0	0	0	0	1	1	0	0	4	2	2	0	1	1	3	1	0	2	3	0	0	7	14	21
Chlorosis	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2
Cholera biliosa... ..	0	0	0	0	0	0	0	0	0	1	0	1	0	0	1	0	0	0	1	1	0	0	2	3	5
Chorea	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
Constipation	0	0	0	0	0	0	1	4	2	8	2	9	0	2	1	4	1	4	2	0	0	0	9	31	40
Convulsions	1	2	2	1	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	4	4	8
Cutaneous diseases	9	3	7	9	4	11	7	9	2	5	1	7	1	3	1	2	0	3	1	1	0	1	33	54	87
Cynanche tonsil. ...	0	0	0	0	1	0	1	1	3	3	1	3	1	0	0	0	0	0	0	0	0	0	7	7	14
..... trachealis	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
Delirium tremens..	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	2	0	2
Dentition	1	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	3	4
Diarrhœa	14	9	5	10	2	2	0	3	2	7	3	6	3	4	3	5	2	2	2	1	0	0	36	49	85

	Under 2 years.		Between 2 and 5.		Between 5 and 10.		Between 10 and 20.		Between 20 and 30.		Between 30 and 40.		Between 40 and 50.		Between 50 and 60.		Between 60 and 70.		Between 70 and 80.		Between 80 and 90.		Total.		Total Cases.
	Ma.	Fm.	Ma	Fm.	Ma.	Fm.	Ma.	Fm.	Ma.	Fm.	Ma.	Fm.	Ma.	Fm.	Ma.	Fm.	Ma.	Fm.	Ma.	Fm.	Ma.	Fm.	Male	Fem.	
Diseases of bones...	0	0	0	0	0	0	1	0	2	1	2	0	0	0	2	0	0	0	0	0	0	0	7	1	8
..... eyes ...	1	1	0	0	0	1	1	1	0	1	0	1	0	1	0	0	0	2	0	1	0	0	2	9	11
..... heart...	0	0	0	0	0	0	0	0	1	1	0	1	1	0	0	0	0	0	0	0	0	0	2	2	4
..... joints...	0	0	1	0	1	0	1	0	2	2	0	1	0	2	0	0	1	0	0	0	0	0	6	5	11
Disordered bowels .	3	3	0	1	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	4	5	9
Dysentery	0	0	2	0	1	0	0	1	0	2	0	1	0	0	1	0	0	2	0	1	0	0	4	7	11
Dyspepsia	0	0	0	0	0	0	1	6	4	22	3	18	0	17	3	15	2	5	2	3	0	0	15	86	101
Dysuria	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	1
Enteritis	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2
Epilepsy	0	0	0	0	0	1	1	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	2	2	4
Epistaxis	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
Erysipelas.....	0	0	0	0	0	0	0	1	0	0	0	1	0	0	2	1	0	0	0	0	0	0	2	3	5
Erythema	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	1
Fistula in ano	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	1
Fractures	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	1	0	0	0	0	0	0	1	2	3
Fungus	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	1
Gastritis, chronic...	0	0	0	0	0	0	0	0	0	3	0	3	1	4	0	1	0	0	0	0	0	0	1	11	12
Gonorrhœa	0	0	0	0	0	0	2	8	9	6	2	0	0	0	0	0	0	1	0	0	0	0	13	15	28
Gravel	0	0	0	0	0	0	0	1	0	1	0	0	0	1	0	0	1	0	0	1	0	0	1	4	5
Hæmatemesis	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	1
Hæmoptysis	0	0	0	0	0	0	0	0	3	0	0	1	0	0	0	0	0	0	0	0	0	0	3	1	4
Hæmorrhoids	0	0	0	0	0	0	0	2	1	0	0	1	1	1	0	0	0	0	0	0	0	0	2	4	6
Hemicrania	0	0	0	0	0	0	0	1	3	2	2	1	1	2	1	1	0	0	1	0	0	0	8	7	15
Hernia	1	1	1	1	0	0	0	0	1	0	0	1	3	1	3	0	1	3	0	0	0	0	10	7	17

	Under 2 years.		Between 2 and 5.		Between 5 and 10.		Between 10 and 20.		Between 20 and 30.		Between 30 and 40.		Between 40 and 50.		Between 50 and 60.		Between 60 and 70.		Between 70 and 80.		Between 80 and 90.		Total.		Total Cases.
	Ma.	Fm.	Ma.	Fm.	Ma.	Fm.	Ma.	Fm.	Ma.	Fm.	Ma.	Fm.	Ma.	Fm.	Ma.	Fm.	Ma.	Fm.	Ma.	Fm.	Ma.	Fm.	Male	Fem.	
Hernia humoralis..	0	0	0	0	0	0	1	0	3	0	0	0	1	0	0	0	0	0	0	0	0	0	5	0	5
Herpes	0	0	1	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	4
Hydrocephalus.....	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2
Hysteria	0	0	0	0	0	0	0	3	0	4	0	1	0	0	0	0	0	0	0	0	0	0	0	8	8
Icterus	0	0	0	0	0	0	0	1	2	0	1	2	0	1	0	1	0	0	0	0	0	0	3	5	8
Incontin. of urine	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2
Influenza	2	2	3	3	2	1	10	6	6	15	12	14	16	19	11	23	9	14	1	7	1	0	73	104	177
Laryngitis, chronic	0	0	0	0	0	0	0	0	0	2	1	0	0	1	0	0	0	0	0	0	0	0	1	3	4
Leucorrhœa	0	0	0	0	0	0	0	0	0	1	0	1	0	1	0	1	0	0	0	0	0	0	0	4	4
Lumbago	0	0	0	0	0	0	0	0	1	1	1	4	3	4	2	3	2	0	0	5	0	0	9	17	26
Mania	0	0	0	0	0	0	1	0	1	1	1	1	1	0	2	0	0	1	0	0	0	0	6	3	9
Meningitis	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
Menorrhagia	0	0	0	0	0	0	0	0	0	2	0	2	0	1	0	0	0	0	0	0	0	0	0	5	5
Otitis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	1
Paralysis	0	0	0	0	0	0	0	0	0	0	1	2	1	0	0	1	3	0	0	1	0	0	5	4	9
Parotiditis	2	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	3
Pericarditis	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
Peritonitis	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
.....chronic...	0	0	0	0	0	0	0	0	0	1	0	1	0	1	0	0	0	0	0	0	0	0	0	3	3
.....puerperal	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2
Pertussis	2	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	1	3
Phlegmasia dolens	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	1
Phlogosis	0	0	1	0	2	0	1	6	0	4	1	1	1	5	1	0	1	3	0	0	0	0	8	19	27
Phthisis.....	0	0	0	0	0	0	1	0	1	4	4	1	4	0	2	0	0	0	0	0	0	0	12	5	17

	Under 2 years.		Between 2 and 5.		Between 5 and 10.		Between 10 and 20.		Between 20 and 30.		Between 30 and 40.		Between 40 and 50.		Between 50 and 60.		Between 60 and 70.		Between 70 and 80.		Between 80 and 90.		Total.		Total Cases.
	Ma.	Fm.	Ma.	Fm.	Ma.	Fm.	Ma.	Fm.	Ma.	Fm.	Ma.	Fm.	Ma.	Fm.	Ma.	Fm.	Ma.	Fm.	Ma.	Fm.	Ma.	Fm.	Male	Fem.	
Pleuritis	0	0	0	0	0	0	4	0	1	0	1	2	1	0	0	0	0	1	0	0	0	0	7	3	10
Pleurodynia	0	0	0	0	0	0	0	0	2	5	1	4	0	4	1	5	0	2	0	1	1	0	21	5	26
Pneumonia	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
Podagra.....	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	0	0	0	0	0	0	0	2	1	3
Prolapsus uteri ...	0	0	0	0	0	0	0	0	0	0	0	3	0	2	0	0	0	0	0	0	0	1	0	6	6
Ptyalism	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
Rheumatism	0	0	0	1	0	0	6	6	6	9	7	3	8	6	3	4	3	3	1	2	0	1	33	33	66
.... chronic	0	0	0	0	0	0	0	0	0	1	1	3	2	1	0	3	1	2	0	0	0	0	4	10	14
Rubeola...	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
Scarlatina	0	0	0	1	1	2	0	1	1	1	0	1	0	0	0	1	0	0	0	0	0	0	2	7	9
Scrofula.....	0	1	3	0	0	1	3	1	0	3	0	0	0	0	0	0	0	0	0	0	0	0	6	6	12
Stricture of urethra	0	0	0	0	0	0	0	0	1	0	2	0	0	0	0	0	0	0	0	0	0	0	3	0	3
Synochus	1	1	4	6	15	12	10	12	11	6	7	7	2	6	2	5	1	3	0	1	0	0	53	59	112
Syphilis.....	0	0	0	0	0	0	2	8	4	7	4	2	1	2	0	0	0	0	0	0	0	0	11	19	30
Typhus	0	0	0	0	2	1	0	4	2	2	1	1	1	0	0	0	0	0	1	3	0	0	6	8	14
Ulcers	0	0	0	0	1	1	0	1	2	4	1	3	6	5	2	6	0	3	1	3	0	0	13	26	39
Urticaria	0	0	0	0	1	2	0	0	3	0	0	1	0	1	0	0	0	1	0	0	0	0	4	5	9
Varices	0	0	0	0	0	0	0	0	0	2	1	0	0	0	0	0	0	1	0	0	0	0	1	3	4
Variola	1	2	6	2	1	4	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8	10	18
Worms, intestinal.	0	0	1	3	2	5	0	1	0	3	0	1	1	0	0	0	0	0	0	0	0	0	4	13	17
Wounds, contusions, &c.	1	1	0	1	2	1	5	1	5	2	5	4	8	4	12	3	3	4	1	1	0	0	42	22	64
Total	52	34	48	47	52	55	71	113	101	175	81	154	88	134	79	111	43	84	18	45	3	2	636	954	1590

TABLE 3.—*Shewing the sex and age of the patients whose cases terminated fatally.*

	Under 2 years.		2 to 5.		5 to 10.		10 to 20.		20 to 30.		30 to 40.		40 to 50.		50 to 60.		60 to 70.		70 to 80.		TOTAL.		TOTAL DEATHS.
	Ma.	Fem	Ma.	Fem	Ma.	Fem	Ma.	Fem	Ma.	Fem	Ma.	Fem	Ma.	Fem	Ma.	Fem	Ma.	Fem	Ma.	Fem	Ma.	Fem	
Abscess	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	1
Anasarca	0	0	0	0	0	0	0	0	0	1	0	1	1	1	0	2	2	0	0	0	3	5	8
Chronic bronchitis	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	1	3	0	1	3	4	7
Constipation	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	1
Convulsions	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	1
Cynanche tracheal.	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
Dentition	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
Diarrhœa	2	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	3	1	4
Fungus	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1
Hydrocephalus	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2
Influenza	0	0	1	0	0	0	0	0	0	0	0	0	2	0	1	1	2	2	0	0	6	3	9
Mania	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	1
Paralysis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
Pericarditis	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	1
Phthisis	0	0	0	0	0	0	1	0	0	3	2	1	4	0	2	0	0	0	0	0	9	4	13
Pleuritis	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	1
Ptyalism	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
Struma	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
Synochus	0	0	0	0	2	0	0	1	0	1	0	0	0	0	0	0	0	3	0	0	2	5	7
Typhus	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	1	1	2
Variola	0	0	2	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	4
Wound	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
Total	2	2	4	3	2	2	2	2	1	6	3	3	9	2	5	3	6	9	1	2	35	34	69

The report of the year 1837 possesses few striking features, and will consequently not require many illustrative remarks. The epidemic and contagious diseases, which, it may be generally observed, occasion the greatest differences in the number of cases and in the mortality of any particular year, occupy but a small portion of the present report. In 1836, the cases of measles, scarlatina, and small-pox, formed rather more than a tenth part of the whole number of cases, and the deaths from these diseases constituted more than a fourth part of the total number of deaths. In 1837, the number of patients affected with these diseases was only twenty-eight, or about one-fifth part of the whole number of cases, and the deaths, which were all caused by the small-pox, were only as one in seventeen.

Influenza.—This epidemic began to shew itself amongst the paupers about the middle of January. It attacked persons of all ages, but its effects were much more severely felt by the aged and infirm than by the young; and recovery in the former class of individuals was an exceedingly slow process. Those who were habitually the subjects of chronic bronchitis suffered greatly from influenza, and with one exception the deaths all occurred in persons of this kind. The febrile symptoms were in no instance acute, but the obstructed condition of the bronchial tubes, which arose from the congestion of their lining membrane, and the immense quantity of thick mucus which this contained, caused the circulation of imperfectly arterialized blood through the vessels of the brain; the powers of life were

soon prostrated, the pulse became frequent and weak, the mind wandering, and death took place generally from the seventh to the fourteenth day. Owing to incessant occupation amongst the living, it was impossible to examine many of the bodies of those who died of influenza. In the autopsies that I witnessed, nothing was observed but a greatly congested state of the lungs and bronchial membrane, and large accumulation of mucus within the bronchi. In one old man, who had long been a sufferer from chronic bronchitis, and who died eleven days after his admission into the Infirmary, one of the largest divisions of the left bronchus was much contracted at its commencement by an osseous ring, beyond which the tube was preternaturally dilated. The whole of the pericardium exhibited marks of acute inflammation; the cardial portion was covered with honeycomb lymph of a bright red colour, and one-eighth of an inch in thickness, and the free portion of the membrane was lined with lymph of the same character; the sac contained about two ounces of bloody serum. The left auriculo-ventricular opening was contracted from cartilaginous thickening of the valve. The pericarditis was not suspected in this patient previous to death, nor could I afterwards recal any symptom to indicate its existence, either in the state of the pulse, the presence of pain, or in any peculiarity of position adopted by the patient. The number of patients attacked by the influenza of 1832 was, according to my experience, much greater than that of 1837; but the mortality occasioned by the latter exceeded that from the former

very considerably. The different seasons of the year at which the two epidemics occurred, account satisfactorily for the increased fatality of the latter.

Typhus.—Typhus fever is a very unfrequent disease in Birmingham, so much so, that I have never before had occasion to record so large a number as fourteen cases of typhus in one year. Eight of these were of the *exanthematous* species, a form of disease which I had never seen before the present year; with one exception, they occurred in two families living in contiguous houses in a court in Brickkiln-street. They were marked by the rubeloid eruption, by sub-acute pneumonia, and great prostration of strength from the commencement. One man, æt. 35, died, the others slowly recovered.

The comparative freedom that Birmingham enjoys from typhus and other fevers which occasionally produce such desolating effects amongst the poorer inhabitants of large towns, is owing, in a great measure, to the situation and construction of the town itself, and in some degree also to the intelligence and superior condition of the inhabitants. Birmingham is situated upon some of the highest ground in the kingdom; the surface upon which it stands is extremely undulating; its drains, which are ample and numerous, are, in consequence, able freely to carry off the water from the streets and houses; the streets are generally wide, the houses seldom exceed three stories in height, and the wind, therefore, has the power of ventilating the town most perfectly. A large portion of the population are artizans, and not mere labourers; they reside

for the most part in separate houses, in the appearance and cleanliness of which, they take more pride than if they were only lodgings. The number of persons employed in any one manufactory is small as compared with many other towns, and the employers are better acquainted with the habits and condition of their workmen, and are enabled to exercise a greater moral control over them. These circumstances combined, afford powerful checks against the origin or propagation of contagious fevers in Birmingham. Table 3, which exhibits the age of the fatal cases, presents a very strong contrast when compared with the corresponding table of the preceding year. Of the one hundred and twelve deaths in 1836, more than one-half occurred in children under five years of age, and rather more than one-fifth had attained their fortieth year. Of the ninety-six deaths recorded in the table of the present year, thirty-seven, or more than one-half occurred in persons whose age exceeded forty years, whilst eleven only, or not one-sixth, were children under five years of age.

The fatal case of *wound* was the following:— Wm. Windsor, æt. 12, glass-cutter, whilst endeavouring to walk along an iron rail, fell on the rail with one leg on each side of it, so that his perineum came in violent contact with the iron. The accident happened at eleven o'clock on the 30th of July. I saw him at two; there was a small wound in the perineum, immediately behind the scrotum, from which a little blood had flowed. He had tried to make water, but was unable. I attempted repeatedly to pass a catheter into the bladder, but without

avail; it passed about four inches down the urethra and there stopped, and all the time these attempts were being made, blood flowed in considerable quantities through the catheter and by the side of it. The boy complained of great pain when the catheter reached that part of the urethra which corresponded with the external wound. At five o'clock the attempts to pass a catheter were repeated, but unavailingly. At ten, P.M., there was much swelling about the scrotum and perineum, the bladder was greatly distended, and the desire to make water was urgent; it was determined, therefore, to puncture the bladder through the rectum, and to trust to time for the restoration of the natural passage. The trocar was accordingly introduced, but in withdrawing the stilet the canula by some mischance slipped from the opening. Nevertheless water flowed freely from the rectum, the distension of the bladder ceased, and after making incisions into the scrotum and perineum for the evacuation of the effused urine, a poultice was applied to these parts, and an opiate was administered. On the following morning it was found that the boy had slept comfortably, and that the urine had flowed freely from the rectum. The bowels were distended and uneasy, the pulse small, and the tongue coated. About four o'clock, P.M., vomiting commenced, and continued at intervals for several hours; the bladder became distended, but urine flowed through the rectum when pressure was made on the lower part of the belly. The lower part of the abdomen became tender on pressure, the pulse was, in the evening, small and quick; there was also great restlessness, thirst, and a depressed and anxious

countenance. During the following night the soreness of the belly increased, the bowels became tense, the pulse more feeble, the restlessness increased, and death took place at noon on the 11th of August.

Dissection twenty-two hours after death.—The peritoneum was inflamed, and its sac contained several ounces of turbid serum, with a few flakes of lymph. The rectum, bladder, and urethra, were removed. The bladder was half full of urine, and its mucous membrane in a healthy condition. The trocar had entered it exactly in the meridian line, about half an inch behind the commencement of the urethra, and between the two ureters. The puncture remained pervious to a full-sized probe. The peritoneum was uninjured by the operation, but the cellular tissue between the bladder and rectum was infiltrated with urine, and for an inch round the place where the trocar had passed, there was a deposition of dark coloured pus in the meshes of the cellular tissue. The urethra was found completely divided, and very much lacerated just beyond the termination of the bulb, in consequence of this part of it having been situated between the iron bar on which the boy fell and the os pubis.

The boy who is recorded as having died of ptyalism, was one of the numerous victims to that state of the law by which druggists are suffered to prescribe and administer medicines of any or every power or quality. This boy had eight fever powders, containing calomel, given to him by a druggist, and the consequence was death, from sloughing of the cheek and gums, and extreme debility.

ARTICLE XIV.

A

REPORT OF THE CASES OF SICKNESS

THAT OCCURRED AT THE

ASYLUM FOR THE CHILDREN OF THE POOR

OF

THE PARISH OF BIRMINGHAM,

BETWEEN JUNE THE 30TH AND DECEMBER 31ST, 1837.

BY F. RYLAND, ESQ.

	Under 1 year.		Between 1 and 2.		Between 2 and 3.		Between 3 and 4.		Between 4 and 5.		Between 5 and 10.		More than 10.		Total.		Total Cases.	Deaths.		Tot. Dths.
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.		M.	F.	
Abscess	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	1	0	0	0
Bronchitis	0	0	0	0	1	0	0	0	0	0	1	1	2	0	4	1	5	1	0	1
Cancrum oris	0	0	0	0	0	0	1	0	1	0	0	0	0	0	2	0	2	1	0	1
Convulsions	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0
Croup	0	0	0	0	0	0	0	0	1	0	2	1	0	0	3	1	4	2	0	2
Diarrhœa	0	0	0	0	0	1	1	0	1	1	4	1	1	5	7	8	15	1	1	2
Fever	0	0	0	0	0	0	0	0	0	0	8	6	2	8	10	14	24	2	0	2
Ophthalmia	0	0	0	0	0	0	0	0	0	0	4	3	0	1	4	4	8	0	0	0
Peritonitis	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1	0	1	1
Phthisis	0	0	0	0	0	0	0	0	0	0	2	2	0	0	2	2	4	1	1	2
Purpura	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0
Rubeola	1	0	2	3	4	2	3	5	4	8	6	6	0	1	20	25	45	3	8	11
Sloughing of the pudendum	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	1	0	1	1
Struma	0	2	1	0	1	0	0	1	2	2	5	3	0	1	9	9	18	4	4	8
Varicella	0	0	1	0	0	0	1	0	1	2	0	1	0	0	3	3	6	0	0	0
Total	1	2	5	4	6	3	6	7	10	13	33	24	5	17	66	70	136	15	16	31

In explanation of this report of cases at the Asylum, being only for the period of six months, I beg to state that it is part of the duty of the surgeon

of the Birmingham Town Infirmary to attend the children residing in the Asylum by rotation, and for six months at a time. Besides the cases recorded, there were many children affected with itch, scald-head, and slight scrofulous affections of the skin and glands, which were not admitted into the infirmary connected with the Asylum, and of which, therefore, no register was kept.

Cancrum Oris.—The first case of this disease of which I took particular notice, was that of William Brodie, a healthy boy, æt. 5, who had been an inmate of the Asylum a few weeks only. He was suddenly seized with symptoms of croup in the evening of the 15th of October. One of my colleagues in my absence saw the patient, and ordered six leeches to the throat, three grains of calomel every hour, and an antimonial mixture every half-hour, till vomiting should ensue. On the following morning the boy was much relieved ; he had taken four powders only, but they had produced several dark green evacuations from the bowels, and much vomiting had followed the use of the antimonial. The breathing was still accelerated, but the croupal sound, which had been very loud on the previous evening, was greatly diminished ; the cough was loose, and the pulse soft. Measles had fully developed themselves all over the body. Ordered to continue the antimonial. On the 17th, the improvement in the respiration and cough was increased ; measles still thickly out ; mouth sore from the effects of the calomel. 20th. The eruption nearly gone, and the boy in every respect better, the respiration being quite free, and the cough

loose and less frequent. On the 31st, the soreness of Brodie's mouth, which I was at first induced to ascribe to the mercury he had taken, had assumed all the characters of *cancrum oris*. The right cheek was very much swelled, and the buccal surface had within it a deep fetid slough as large as a halfpenny, which appeared to be extending daily; the gums were separated from the teeth, and the tongue was swelled and ulcerated at the edges. The boy's appetite was good and his bowels regular. There was an appearance of excitement almost amounting to wildness about his countenance, and particularly about the eyes, and the pulse was very quick. A lotion containing chlorate of soda was first tried, without benefit; afterwards, a drachm of muriatic acid in an ounce of syrup of poppies, and subsequently a decoction of bark, but all without any benefit. Internally he took quinine and port wine three or four times a day, opium at night, and a highly nutritious diet. Nov. 2nd. There was great hardness of the right cheek externally, with a blush of redness upon it, and so much œdema that the eye was nearly closed. No improvement had taken place in the mouth, but the general health was improving. In a few days from the last date, the ulceration on the inner side of the cheek began to heal rapidly, and in ten days was well; the external swelling of the cheek remained some time, and over the spot where the internal ulcer had existed, a deep indentation was apparent. The only topical application that had been used latterly, was a decoction of bark, with alum and tincture of myrrh; the quinine and wine were continued till health was perfectly re-established.

During the time that this case was in progress, three or four of the children who died of measles, were observed to have cancrum oris in an incipient state, but death occurred before the disease had made much progress. In the same ward in which Brodie lay, was a brother of his, who, two or three days after the appearance of measles, became affected with ulceration and bleeding of the gums, which separated from the teeth. The disease was speedily cured by the muriatic-acid lotion.

Wm. Walker, æt. 4, was brought about the same time into the sick ward, and in him the canker had produced as severe effects as in the case of Brodie; there was a deep sloughy ulcer on the inside of the cheek, and a line of ulceration along the edges of the gums. He used the same measures topical and general as Brodie, and was soon cured. On the 9th of November, Charles Pashly, æt. 3, of intensely strumous diathesis, with small limbs and a large belly, was brought into the sick ward on account of the state of his health. Upon inspecting his mouth, the existence of the canker was discovered. On the 13th, there was a large sloughy ulcer on the right side, at the junction of the cheek and the gum, penetrating upwards to a great extent towards the malar bone. Externally the cheek was very much swelled, but pale; the right eye was almost concealed by the swelling. On the 17th, the cheek gave way externally, and a deep slough appeared, which continued to extend itself at the edges, till, on the 23rd, it reached the angle of the lips, making a large gap in the side of the mouth, and laying bare the upper molar teeth. This boy's

appetite continued remarkably good till about the 21st, when he became restless, lost his desire for food, and suffered severely from diarrhœa and want of sleep. He took opium at bed-time, quinine, wine, and nourishing food, during the day; and various topical applications were used to the sore without benefit. He died worn out on the evening of the 24th. The body was examined on the following day; every internal organ was in a healthy condition, except the mesenteric glands, which were considerably enlarged. The disease of the cheek reached externally from the angle of the mouth to the corner of the eye. The cellular and adipose tissues were in a state of ashy slough; the superior maxillary and malar bones were denuded of periosteum, but they retained their proper colour and texture, and were apparently unaffected by the surrounding disease.

During the first week of December, Ellen Jukes, æt. 4, a large-bellied scrofulous child, who was in the sick ward on account of a sloughing sore on the left hip, was perceived to have a large sloughing ulcer on the inside of the left cheek. In spite of the treatment adopted, the canker spread rapidly, and perforated the cheek on the 19th of December. She was immediately removed to the workhouse, and after the lapse of a few days, the sore reached from the external corner of the eye to the angle of the mouth, presenting a most hideous spectacle. The patient continued, however, to eat, drink, and sleep well at the time; the sore on the left hip, and a similar one which had formed subsequently on the right hip, healed. On the 7th of January, 1838,

the sore in the cheek had begun to look cleaner. 14th. It had diminished in size, and was full of healthy granulations, except at the centre, where a blackened portion of the superior maxillary bone could be seen through the hole in the cheek. After a few weeks, a portion of this bone, containing an old molar tooth and a new one making its way at the root of the other, came away through the ulcer in the cheek; after which, the sore rapidly cicatrized, and the child was restored to perfect health.

Some weeks previous to the occurrence of these cases, a disease similar in its nature, but affecting a different part of the body, had been noticed at the Asylum. Sarah Chatwin, æt. 3, broke out with the measles on the 12th of August; she suffered little, and was soon convalescent. On the 22d, the pudendum was observed to be inflamed, and a sore speedily formed on the inner side of the left labium; it soon assumed a phagedœnic character, and extended itself to the right labium, afterwards to the mons veneris and to the parietes of the abdomen, nearly as high as the umbilicus, destroying the skin and the sub-cutaneous cellular and adipose tissues. She died from the exhaustion produced by the disease on the 8th of September. Two other female children who died of measles about the same time, had just before their death inflammation of one of the labia, accompanied by the formation of a vesicle filled with a dark coloured fluid. This was without doubt the commencement of a disease similar to that which destroyed Sarah Chatwin.

In the following case death was occasioned by the sloughing of one of the laryngeal cartilages:—

Letitia Wilks, æt. 4, had measles on the 11th of August; during the night of the 23d she was seized with symptoms resembling croup; the respiration was accelerated, difficult, and sonorous. She became daily worse, and died on the 26th, apparently more from exhaustion than from suffocation. Her mental faculties remained perfectly clear till the last. On a *post mortem* examination it was found that the disease was not croup. The trachea was free from inflammation; the epiglottis was reddened, thickened, and erect; at its upper edge there was a deposition of purulent matter beneath the mucous membrane; lower down on each side were broad ulcerations covered with ash coloured sloughs. At the anterior part of the larynx, just below the junction of the vocal cords, was a very large ulcer, communicating with a cavity, within which could be seen the thyroid cartilage in a state of slough. The other laryngeal cartilages were healthy.

It will be observed that the preceding cases, which were all instances of low inflammatory action succeeded by sloughing and phagedenic ulceration in the parts attacked, occurred with three exceptions after measles. Two of the exceptions, Charles Pashley and Ellen Jukes, were afflicted with scrofula to a severe extent; at the time of their being attacked by the cancrum oris, they were residing in the sick ward on account of the state of their health. It has been remarked by writers, that cancrum oris most frequently ensues after the eruptive fevers, and especially after measles. I have seen it twice after small-pox, and once after simple continued fever; and the latter case occurred in the Asylum.

I have no hesitation in ascribing the occurrence of these diseases, both cancrum oris and sloughing of the pudendum, principally to the peculiar *locale* and other circumstances of the Asylum. The measles and the strumous diathesis were, without doubt, strongly conducive to the production of these forms of disease; but as the former have so often existed in the town without being followed by the latter in any one instance within my own observation, or within the range of my enquiries, I think myself fully justified in the foregoing conclusion. The recovery of Ellen Jukes, after her removal to the workhouse, which is situated in one of the most densely populated parts of Birmingham, is a strong argument for the deleterious qualities of the atmosphere of the Asylum. Her case was certainly one of the worst that occurred. Before her removal, it was continually becoming more desperate, and in fact she was sent away, rather for the purpose of getting rid of a horrible spectacle from amongst the children, than with any idea of benefit accruing to herself from the change.

Fever.—The majority of the cases of fever occurred at the latter end of September and throughout October. There were twenty-four in all, and two deaths, which is rather a small mortality. The fever was a mild typhoid; it commenced for the most part in a very insidious manner, without any distinct initiatory stage, affecting the brain more particularly in some cases, and the alimentary canal in others. In the former class of cases, febrile excitement was scarcely apparent, but the patients soon fell into a dull, almost torpid condition; the

senses became blunted, the mental and corporeal energies paralysed. Very many of these cases were removed to the infirmary connected with the work-house, and they soom improved after the change, one of them only having a fatal termination.

Phthisis.—Four cases of pulmonary phthisis were admitted into the sick ward, two boys and two girls ; of these, two were fatal, a boy, æt. 5, and a girl, æt. 6. In the boy, together with a tubercular state of both lungs, the upper lobe of the left lung was gangrenous. In both the fatal cases, it was observed that the abdomen, which at the commencement of the final illness was of very large size, diminished considerably as the pulmonary disease advanced ; and on inspecting the bodies after death, the mesenteric glands, though enlarged, were much smaller than I had expected to find them from the appearance of the children at the time of their admission into the sick-house. This is attributable partly, no doubt, to the general wasting of the body, and partly to the setting up of active disease in the chest.

Measles.—The cases of measles were in number forty-five, the deaths were eleven, or about one in four. The epidemic began in August, when there were two cases; in September there were thirty-one, and the remainder occurred in October and November. All the patients but one were under nine years of age, and almost all those that died were under four. Measles has always been a most fatal disease at the Asylum. Amongst the cases now recorded, there was not a single example of acute inflammation in the chest; the eruption was

imperfectly developed, the attendant fever typhoid, and death appeared to result from bronchitis, followed by congestion of the lungs and brain.

Struma.—Eighteen cases of struma are recorded, of which eight terminated in death. The number eighteen does not, of course, include all the cases of struma that existed in the Asylum, but only those children who were incapacitated by the extent of their disease from mingling in the sports or labours of their fellows, and who were consequently placed in the apartments of the sick, and committed to the care of the medical attendant. Death in these instances was occasioned by a slow process of wasting, and by diarrhœa, which was quite beyond the control of medicine. Such of the bodies as were opened, shewed an ex-sanguineous condition of the body generally, a thoroughly empty state of the intestines, and immense scrofulous enlargement of the mesenteric glands. These latter organs were sometimes found as big as walnuts, arranged in large clusters near the spine, thus arresting almost completely the passage of nourishment from the intestines into the circulation.

I have thus briefly noticed the most important diseases that occurred in the Asylum during the six months in which I superintended the health of the children; and in order that the report may be better understood, I shall conclude with a short account of the establishment where these cases of diseases occurred.

The Asylum is situated at a short distance from Birmingham, in a low valley, much exposed to the

easterly and westerly winds; the substratum of the soil on which it stands is a deep clay; its atmosphere is, therefore, necessarily cold and damp. The principal apartments for the children are a common room on the ground floor, and a separate dormitory for the boys and girls, each of them a hundred feet long, twenty-five feet wide, and about eleven feet high. About a hundred girls sleep in one of the rooms, and a hundred and forty boys in the other: these apartments are well ventilated all the day, and are kept scrupulously clean. Besides these rooms, there is a lofty and spacious room for the infants, and other rooms where the younger and weaker children are kept by themselves, that they may not be oppressed by those of stronger growth. The number of children may be stated at three hundred, but the number and the individuals who compose the number, are subject to frequent fluctuation and variation. They are admitted from early infancy, when, however, but very few enter the Asylum, to the age of ten or twelve years. They are kept in the establishment, if not removed by their parents, till they are able to be apprenticed or placed in service. The boys above the age of seven years work at pin-heading; the girls formerly worked at lace-making; they are now employed in the domestic avocations of the house and in sewing. The food given to the children is nutritious and amply sufficient for them; large play-grounds are provided; cleanliness is strictly enforced; elementary instruction is given, and great anxiety is shewn to promote, as far as the nature and objects of the

establishment permit, the comfort and happiness of the children. It is a fact, nevertheless, notorious to the managing committee of the Asylum, and especially to the medical men connected with the establishment, that these efforts are not attended with success; that the health of the children generally is not good; that scrofula in all its forms abounds within the Asylum, and that the rate of mortality is much higher than amongst the same number of children placed in what, to most observers, would appear more unfavourable circumstances, I mean in their own destitute homes. The mortality of the Asylum is rather more than nineteen annually (taking an average of eight years), or about one in fifteen, which, considering that the majority of the children are between the ages of five and twelve, is an exceedingly high rate of mortality. The causes of this state of things may be sought, perhaps, in the following circumstances:—

First.—The locality of the Asylum, the damp, cold air of such a situation being highly favourable to the origin and development of scrofulous diseases.

Second.—The congregation of large numbers of children together, especially during the night, when they remain in a close room for nine or ten successive hours, with but little possibility of having their apartments ventilated.

Third.—The inmates of the Asylum are, in a large number of instances, the weakly members of a family, for in times of distress it is reasonable to conclude that parents who are under the necessity of sending some of their children to be taken care

of by the parish authorities, will first get rid of those who require the most attention, and are least able to do anything for the support of themselves or their family. Thus, these children may be viewed as select lives, but lives selected from the worst offspring of the most degraded and indigent classes in the town. This is of course not applicable to the whole of the residents in the Asylum; families of children, suddenly deprived of their parents by death, may be occasionally admitted; or a time of severe mercantile distress may compel healthy and industrious parents to place the younger members of their family within this establishment till improved circumstances enable them again to support their children at home; but there must always be such a proportion of tainted unhealthy stock amongst the inmates of the Asylum as to present numerous victims thoroughly prepared for the malign influences of the unfavourable locality and the aggregated numbers of this institution.

I subjoin a tabular view of the number of deaths which have occurred in each of the last eight years at the Asylum, of the ages at which they took place, and the diseases by which they were produced.

	In the first half-year.	In the second half-year.
The number of deaths in 1831 were	17	4
1832	9	0
1833	19	7
1834	14	6
1835	5	0
1836	11	4
1837	10	31
1838	8	10
	93	62

Table shewing the sex, age, and fatal disease of 155 *children who died in the Birmingham Asylum in eight successive years, commencing with* 1831.

	Under 1 year.		Between 1 and 2.		Between 2 and 3.		Between 3 and 4.		Between 4 and 5.		Between 5 and 10.		More than 10.		Age unknown.		Sex unkn.	Total.		Total Cases.
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.		M	F.	
Anasarca	0	0	0	0	0	0	0	0	0	0	1	1	0	1	0	0	0	1	2	3
Bronchitis	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2
Croup	0	0	0	0	0	0	0	0	1	0	3	1	0	0	0	0	0	4	1	5
Diarrhœa	1	2	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	2	2	4
Epilepsy.....	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	1
Erysipelas	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	1
Fever	0	0	0	0	0	0	2	0	1	0	4	5	0	1	0	1	0	7	7	14
Inflam. of viscera	0	0	0	0	0	0	0	0	0	0	2	3	0	4	0	0	0	2	7	9
Marasmus	0	3	2	2	1	0	2	0	3	1	8	8	2	3	0	0	0	18	17	35
Phthisis	0	0	0	0	0	0	0	0	0	0	1	2	1	5	2	2	0	4	9	13
Pertussis	0	0	0	1	1	1	1	2	1	0	1	4	0	0	1	1	0	5	9	14
Rubeola	0	0	1	1	1	3	3	2	0	4	1	3	0	0	0	1	1	6	14	20
Struma	0	0	1	1	0	0	0	1	1	1	4	8	0	0	0	0	0	6	11	17
Variola	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	1	0	1
Unspecified diseas.	1	0	0	1	0	1	1	1	0	1	1	1	0	1	1	2	2	4	8	12
Total	2	5	4	6	6	5	10	6	7	7	26	37	4	15	4	7	4	63	88	151*

* Sex unknown 4, making a total of 155.

PART V.

BIOGRAPHY.

ARTICLE XV.

BIOGRAPHICAL MEMOIR

OF

THE LATE HENRY PARK ESQ., SURGEON,

OF LIVERPOOL.

The following account of the late Mr. Park is compiled principally from materials, in the form of a narrative, addressed to a lady, and furnished by his daughter, Miss Park, of Olive-bank Cottage, near Liverpool, and also from memoranda supplied by those who had the best means of knowing his worth, personal and professional.*

All the material facts respecting her late father's history, will be stated, as nearly as possible, in Miss Park's own language; but there are certain parts of it, relating to other connexions of the family, which, as they cannot be interesting to the professional or general reader, must be unavoidably omitted. Miss Park begins her narrative as follows:—

* It was at the suggestion and at the request of Dr. Kendrick, of Warrington, that this memoir has been drawn up for publication in the *Transactions* of the Provincial Medical and Surgical Association.

"My father was born on the 2nd of March, 1744—1745, in a house, not long since demolished, in Water-street, Liverpool. His father was a surgeon and in good practice, but died by a sudden illness, when absent from home, without having made a will. His property being chiefly in land, and therefore devolving to his eldest son, Edward, then two or three years old, my grandmother was left with a very limited income for the education of her five children, of whom the oldest, my aunt Mary, was then twelve years old, and my father, the youngest, I believe had not completed the first year of his life.

"After a few years of female tuition, the two boys were placed as day-scholars with the Rev. — Wolstenholme,* whose school was then in high estimation in the town. My father remained with him to the age of fourteen, and acquired from him, I believe, only a moderate portion of Greek, but a stock of Latin, which seemed always to make a respectable figure, even amongst University men, and a facility in figures, which he always took much pleasure in exercising. My father always spoke of Mr. Wolstenholme with regard, and retained pleasing recollections of his school-days.

"At the age of fourteen he was placed under Mr. Broomfield, a surgeon of the Liverpool Infirmary, an uncle by marriage, and in good practice in the town, though by no means distinguished for pro-

* It may be worth noticing, that this gentleman and my father's two professional masters were remarkable for impatience, and to this influence, continued through all his boyhood and youth, we should perhaps attribute his own bustling quickness of manner, which contrasted sometimes rather amusingly with his natural amenity of temper.

fessional skill; as my father used to say, he had learned the effects of *bad* practice in his first apprenticeship, and of *good* in his second. I suppose this apprenticeship lasted three years, and they must have been employed most diligently. The Infirmary was at that time grievously neglected, and the most important cases were left to the management of the pupils.* This, however culpable on the part of the medical officers, was, no doubt, highly favourable

* I must really give you one anecdote of my father's apprenticeship. Painfully feeling the weight of his responsibility at the Infirmary, on one occasion, when he thought the combined skill and experience of the Hospital were most urgently needed for the preservation of lives and limbs, he wrote pressing notes to the whole body of medical officers, requesting their immediate attendance. Some being prevented by illness or absence from the town, only three answered the summons. The most vivacious of the corps appeared first, swift of foot and voluble of speech, he made the tour of the wards with a hop, skip, and jump, talking all the while with the utmost vehemence, but on subjects quite unconnected with the unhappy objects that lay before him. Having danced into the Hospital, and through it, he then danced out again, but without taking a single step in its duties. Next came one of calmer temperament, a quiet oleaginous kind of man, who gave gentle ear to the reports of the anxious attendant, and followed his guidance quite through the wards, folding and smoothing his hands all the time, and graciously approving all that had been done, but without suggesting a single new idea. The disappointed pupil turned back from his parting bow, now resting all his hopes on the third comer. Bustling and self-important, he approached, and asked a series of questions, to none of which he waited for an answer. One of the patients did, however, fix his attention, and it occurred to him to recommend certain medicines or applications, in addition to those already administered; the names of these I do not remember, but their efficacy depended on their due concoction. They were to be boiled, well boiled, thoroughly boiled. "Boil them well, boil them well; I say boil them well; d—n 'em, boil 'em well; d—n 'em, boil 'em well;" and he retreated, reiterating the order in louder and louder tones as his steps receded from the gate, leaving his bewildered hearer not altogether clear whether he was to administer the boiling to the drugs or to the patients."

to the development of the young student's abilities, kept on the stretch by the humane interest he felt in the patients, and compelled to rely on his own judgment in their treatment. Another burthen, little fit to be laid on a youth of seventeen, was the care of six hundred French prisoners, who seem to have been left to his care, without even the affectation of superintendence. He must have had their language nearly, if not altogether, to acquire when he entered on this office; but so successful was he in its discharge, that the loss of life in the prison was, during this period, considerably less than the average proportion shewn in the general bills of mortality. Nor did he confine his attention to duties strictly professional, but, besides bringing about a thorough reformation in the cleanliness and ventilation of the prison, and in the quantity and the quality of the food provided; he continually exercised his influence in obtaining for the prisoners whatever comforts and indulgencies their situation admitted. Their gaiety of spirit under restraint and privation powerfully engaged his interest, and he was sensible to the gratitude they evinced, by innumerable little gifts, fashioned with the ingenuity characteristic of their nation. He thus acquired an affection for the French, which even the atrocities of the revolution scarcely extinguished in later years, and a facility in the language which he retained to the last. Indeed, so nice was his ear, that he would sometimes challenge, not only the country, but even the province of a Frenchman, from his pronunciation of English. Whilst such were his cares by day, he afforded but a small portion of the night to

rest, many of the dark hours being devoted to books or to the chemical laboratory. At the expiration of these three years he went to London, where he passed a second apprenticeship in the house of the celebrated Mr. Pott, a man whom, both in his professional and private character, he revered and loved. He used to dwell on every recollection associated with him with a delight that you can hardly imagine, unless you had heard him relate his little anecdotes of his 'old master, Pott;' and, besides that the foundation of his subsequent success was in a great measure laid under his tuition, I should think that many little personal peculiarities were unconsciously derived from one with whose character his own appears to have had much congeniality, and for whom he entertained so much deference.*

"From London he went to complete his studies in France, whether for one season or more I cannot well ascertain, nor whether he was both at Paris and Rouen, or at the latter place only. I distinctly remember, however, his praises of the Hotel Dieu, as the Hospital at Rouen was called, and of the distinguished professor, 'Old Le Cat,' whose handwriting, in the honourable testimonials he received

* This remark upon the influence of Mr. Pott's example in forming Mr. Park's peculiar manners is strictly true. The writer of this note attended the Liverpool Infirmary from midsummer 1782 to midsummer 1783, and was, at the time of his attendance, much struck with this peculiarity. But when, in the winter of 1786, he had an opportunity of seeing Mr. Pott in the wards of St. Bartholomew's Hospital, he in a moment recognized the identity of manner in them both. The resemblance was most striking.

from him, he used to treasure as a precious relic.* He now prepared to settle in practice, and Mr. Pott urgently recommended his settling in London, where he predicted he would meet brilliant success. Consideration for his mother, however, determined him in favour of Liverpool, to which he must have returned about the age of twenty-one, or in the year 1766. He now refunded to his mother the expenses of his education. My uncle Edward, as soon as he attained majority, had generously relinquished the claims of an elder son, and made an equal division of property. The death of this exemplary son and brother, who was in other respects calculated to be an ornament to society, occurring soon after, was a severe affliction, not only to his own family, but to all who knew him."

The preceding narrative is exceedingly interesting, as it clearly shews the foundation on which Mr. Park's future excellence was formed. It shews that from the situation of responsibility in which he was placed, not only with respect to the patients of the Infirmary, but also to the large number of prisoners of war committed to his care, that he must have very early acquired the habit of training his mind to the close and accurate observation of diseases, to equally close and accurate thinking,

* Mr. Park "entered with Le Cat March 20, 1766." This is in his own hand-writing, and prefixed to "Chirurgical Observations and Remarks made at Rouen;" and these observations shew that the student's mind was already prepared to analyse all he heard and saw, with a degree of acuteness that would have surprised the Professor had he perused the criticisms that the young Englishman was in the practice of committing to paper after each lecture.

on their causes, progress, and results, and to the means necessary for their relief. How, otherwise, is it to be explained that a youth of seventeen years, whose knowledge of his profession must at that time have been very imperfect, and who had little assistance from his superiors, should have been enabled to discharge such onerous and serious duties, and with such a degree of success as to keep down the amount of the mortality of the prisoners of war below the average rate of the country at that time? All this proves the possession in him of very superior talents, and unwearied diligence and attention in the discharge of his duties. The anecdote which Miss Park has introduced in a note relative to the conduct of three of the medical officers of the Infirmary, is so inexpressibly ludicrous, that it would appear to be almost incredible if it had not been related on such authority. At the present time no medical officer in any public institution in Great Britain would venture to make such a ridiculous exposure of his ignorance and folly. The narrative proceeds thus:—

"When my father came to settle in practice, or before that time, the family removed into Paradise-street, where he lived till his marriage, about ten years after. He began his career with many advantages: his family had been connected with the town from a period almost coeval with its existence, though it could boast no particular distinction, unless it be the transmission of easy competency through a great many generations, as he used to say that not an individual of the race had, for three centuries, shewn either the talent to enrich, or the

spirit to ruin himself. His surgical education had been complete, and even in its earlier stages he had distinguished himself by zeal and ability. His person and manners were peculiarly agreeable, and his convivial spirit made him popular amongst his compeers; whilst his active benevolence caused him to be almost idolized in that class among whom the labours of a young practitioner chiefly lie, and in whose service the first stages of professional experience must be attained. An iron constitution, too, enabled him to combine labour, study, and social enjoyment in a degree which few could have attempted with impunity. A favourable opening for a young surgeon also occurred about this time, by the removal of more than one who had been long established; but I only remember the name of the respected Mr. Pickering. My father's election to the Infirmary was in the year 1767, nine years before his marriage, which took place in 1776. My mother was the eldest daughter of Mr. Ranicar, of West Leigh Hall, near Leigh, in this county, a place that was endeared by having been in his family for some centuries, though otherwise of moderate pretensions. The most perfect congeniality of character, and affection the most devoted, rendered this the happiest of unions, and the ten short years it was permitted to subsist, were the bright portion of his earthly career. But I am passing on too fast, and omitting one circumstance which ought to have been earlier named, viz., the partnership with Mr. Alanson, combining pharmacy with surgery, which he formed soon after his settling, but which was of short duration, as they both found

their position sufficiently strong to release them from the business of compounding medicines.

"On his marriage, he took a house in Basnett-street, at the corner of Leigh-street, a situation which, dark and smoky as it now is, was then so much on the outskirts of the town, that many people thought the young man a little presumptuous in expecting practice to follow him so far. My grandmother then left Paradise-street, and bought a house in Houghton-street, which looked on fields and gardens. In Basnett-street his nine children were born, and seven were living when, as his own handwriting records in the blank leaf of his Bible, 'it pleased God to remove the affectionate mother.' Of the severity of this bereavement, only a heart like his own can form an idea, or do justice to the fortitude with which it was borne. He never named her name, nor ventured any direct allusion to her; but I well remember how he has changed colour at any accidental association, the scent of musk particularly, which had been used in her last illness; and at the age of seventy-five years, when he retired into the country, he said he was only then becoming reconciled to life, which had been a heavy burden to him for nearly forty years. It was evident from what event he dated, though he seemed purposely to avoid precision; for he checked an attempt to recur to the subject. We cannot scan the ways of Providence; but perhaps this dispensation may have been the chastening of a beloved son, to work out still higher degrees of moral excellence. Perhaps this breaking up of his own scheme of earthly hap-

piness had great part in that total disregard of self, which became more and more conspicuous in his character. His whole existence was for others; the happiness of others his only happiness. He now invited his mother and unmarried sister to live with him, and engaged a governess for our education. In the summer of 1788 he removed to Bold-street, to a house which my aunt had judiciously persuaded him to amuse himself with building. Here the next thirty-two years of his life were passed—years of severe toil, bodily and mental, but sweetened by success, by the growing affection of all around him, and by that inward serenity which always results from the exercise of benevolent feelings. I look back with wonder on all I can recollect of the fatigues he used to undergo, and of the habits to which he used to inure himself. His meals were snatched as they might be, scarcely ever without interruption. A night's unbroken rest could never be reckoned on, and was very seldom enjoyed. Indeed, so habitual was this become, that at a later period, when he was withdrawing from practice, he was used to say, 'that, without two broken nights in a week, he could not settle to sleep in the remaining five.' Then, he was totally regardless of weather; would visit a patient on the other side of the water (the river Mersey) in storms which the boatmen could scarcely be bribed to encounter. I do not think he ever possessed more than one great coat, which at length became a prey to the moths. In all weathers his dress was the same; and however much his clothes had been drenched by the rain, he allowed them to dry upon his person; and

when in summer he returned home in profuse perspiration, he exposed himself to strong currents of air, and drank cold water."

As a proof of what extremes of temperature he was able to bear, Miss Park refers to the experiments made at the Infirmary on the effects of heated air. But as an account of these experiments is published in the *Philosophical Transactions*, it is not necessary to refer to them here more at length. It is enough to state that, after remaining in a temperature sufficient to boil eggs, and to heat the metal buttons of his coat to such a degree that they blistered his fingers when he touched them, he walked over Everton Hill in a severe frost without additional clothing. Nothing but an extraordinary strength of constitution could have enabled him to bear up against such extremes of temperature and such excessive labour, which at the same time did not prevent him from entering with much relish into simple and healthful pleasures. He had great delight in a garden. A piece of ground at the end of Upper Parliament-street, and at the corner of Lodge-lane, which had been in the possession of his family since the reign of Elizabeth, was cultivated by him for that purpose ; and thither on a summer evening he was accustomed to repair with some of his family, pleasing himself at the same time with the thought of erecting a dwelling there, on his retreat from business. He took a lively interest in the amusements of his children. His love of children formed a remarkable trait in his character. Miss Park's Memoir, in this place, requires some condensation, but enough will still be left to portray a noble character. Mr. Park had acquired great dexterity

in the use of both his hands, so that he could perform the nicest operation with the left hand as well as with the right; an advantage which proved to be of no small importance after an accident which partially disabled his right arm, and, but for his own presence of mind, might have disabled it altogether.

"It was in the earlier part of his course at the Infirmary that he fell down a flight of stone stairs, and severely fractured the right elbow, and displaced the bones; but, grasping it with his left hand, he reduced it in a moment, before the swelling came on, which, a few minutes later, would have rendered the replacement difficult, if not impracticable. A cure was effected, but the elbow never again bent beyond a right angle.

"I have in my possession a letter* (an autograph

* The letter, from which the following is an extract, is addressed to Dr. George Bell, of Manchester. It is dated Liverpool, 9th August, 1781:—"My worthy friend Park has lately projected an improvement in surgery, which I do not remember to have mentioned to you at our last meeting, and which deserves to be communicated. He has long had a notion that, in white swellings of the elbow and the knee, instead of amputating, according to the common practice, it would be fair and reasonable to make an incision in the joint, to cut out the diseased part of the bones, and to leave it to nature to form an ossification between them by her usual plastic process. He resolved to put his scheme into practice the first fair opportunity, and such an opportunity occurred about five weeks ago at the Infirmary here. The disease was in the joint of the knee, where, it is evident, the operation must be attended with much danger and difficulty, as well from the size of the bones to be cut through, as from the quantity of muscular substance to be divided. The trial was made by Mr. Park, every thing answered beyond expectation, and there is every reason to believe that the hopes with which the operation was undertaken will be fully gratified. I cannot help thinking that the improvement will turn out of capital importance to society; if it should, I shall be happy on that account, and doubly happy on account of the honour which will redound to Mr. Park, who is one of the most candid and generous of men."

of no small value) given me by Mr. Currie, in which his distinguished father describes the first operation of the excision of carious joints. This letter is dated 1781; and the first edition of his father's book on the subject must have been published in 1782 or 1783. It was reprinted many years after, along with the work of a French surgeon (Moreau), on the same subject (by Dr. Jaffray, Professor of Anatomy in the University of Glasgow). My father had an unfortunate aversion to pen and ink, and especially to putting himself in print. His own indifference to distinction, and the simple and unassuming form in which this work was ushered into the world, prevented it, I believe, from attaining that degree of celebrity which might have been the means of saving many a valuable limb from amputation. Except this, he scarcely published any thing, being rarely and with difficulty induced to contribute an article to medical periodicals. It was scarcely possible to extract a letter from him, except on business. He held the office of surgeon to the Infirmary thirty-one years (till the year 1798).* How different was the management of the Hospital during this period, from what my father must have remembered it during the time of his own apprenticeship. Its chief officers, men distinguished by benevolence as well as science,

* During the continuance of the Slave-trade—the vile Slave-trade—a surgeon was appointed to each slave ship, and the young candidate underwent an examination at the Infirmary; but before his appointment, certain fees were demanded. Mr. Park laid up his share of the fees as a fund wherewith to purchase medical books, in aid of a public medical library, to which he was one of the foremost and most liberal contributors.

devoting their most assiduous attention to its interests, and acting together in perfect harmony. My father was on the happiest terms with all his brethren of the profession, but particularly with the late Dr. Brandreth; that eminent man being to him ever a friend and a brother. Their friendship and their professional career began nearly together. I have heard of the keen sensibility with which Dr. Brandreth sympathised with my father on my mother's death; and when, a few years after, he took the adjoining house in Bold-street, we witnessed, and it was a privilege to witness, their daily intercourse, till death deprived my father of a friend who had ever possessed his entire regard, and the enjoyment of whose society had never been clouded by a shadow of misunderstanding.

"My father's private practice continued to increase with the growth of the town, and its greatest burthen was sustained from the age of sixty to sixty-five, though, before that time, he had met with the accident which threatened to bring it altogether to a termination. He was always a careless rider, and had had so many falls in which he had received fractures, that he used to say he had broken every bone in his body, except one arm and one *head*. The last of these, which finished his career of horsemanship, was a fall from a hired horse, on the other side of the river, by which he broke all the ribs on one side, and some of them in two places. In this state he walked a mile to the house of a patient he had gone to visit, and back again, nearly two miles, to the ferry, then crossed the river, and, however severe the torture of

walking, feeling every moment that he was more and more unfit to bear the motion of any sort of vehicle, he persevered until he had reached his own house, and mounted the stairs to his bed. He suffered severely and long, but I believe his recovery was at last perfect.

"He had now passed forty years in labour, almost without intermission or relaxation, a period during which he had never passed twenty-four hours from under his own roof except on duty; but at last it became necessary to lead a more tranquil life. In the year 1815, he formed a partnership with Mr. Jas. Dawson, of whose skill, particularly as an operator, he entertained a high opinion;* and, in the year 1820, he retired to a short distance from the town, where, without being out of the reach of consultation, he might enjoy the rural quiet which had always been the object of his strongest desire. 'When I go into the country,' he used to say, in the pleasing dreams that beguiled many a toilsome hour, 'but no! it will never be, I know I shall die in harness,' was too often the desponding conclusion, after certain changes in some branches of his family had involved him, late in life, in a new and heavy course of expenditure. Yet, with this urgent need of rest, he never reined in the spirit of liberality that postponed its attainment. His only economy consisted in the simplicity of his mode of living;

* Large sums had been offered to him for partnership, but by gentlemen still young in practice. He rejected them, therefore, entertaining too high a sense of the responsibilities of his profession to be induced, by any pecuniary advantage, to risk a disappointment in abilities which, however promising, he had not seen sufficiently tried.

whilst his generosity flowed freely on all around him, I have known him, when a family has suffered reverse of fortune, refund all he had received for past attendances, and in a manner so delicate as neither to give pain nor admit refusal. The time came, nevertheless, when he had realised the amount he had determined on,—and how much more wealthy than many with ten times his revenues! He said, 'Now I have enough, I shall not trouble myself to lay by more.'

"He planned his new establishment on a moderate scale, and indulged himself in giving away the surplus of his income. He had completed his seventy-fifth year when he thus retired, and we took possession of a small but comfortable house, (at least he made it such by a few additions and alterations,) two miles out of the town, on the Wavertree-road. This was the golden period of our lives; that it might have a few years duration was all we dared to hope for. How can we be sufficiently grateful to the Divine mercy, that it extended to eleven, granting him, to the age of nearly eighty-six, uninterrupted health and peace! There is little to be recorded of this period; nor can I feel competent adequately to portray the mind that seemed to shine still more brightly as it approached the term of its earthly course. How many, after long seeking repose, find it wearisome when attained? To him it fully equalled all that he had anticipated; and it was only in the blessed consciousness of having still higher rewards in prospect, and in a tone of still higher cheerfulness, that the phrase, 'When I die,' which we now so

often heard, replaced the former 'When I go to live in the country.' He took singular pleasure in imagining how every detail of arrangement would exist around the objects of his affection when he should be removed; and, I am persuaded, wished that his departure should hardly be felt as a bereavement. He now returned to books, for which he had long wanted leisure, with a fresh and almost youthful relish. He hailed the advance of science, and was always ready to estimate the value of new views with a judgment unbiassed by any trace of that jealousy with which men, advanced in years, are often prone to look upon innovation. His reading, too, now afforded him a gratification which the genuine modesty and simplicity of his character had prevented him from anticipating, in the honourable mention of himself and his labours, which he found in the professional publications of the day; and he reaped another grateful harvest from these labours, in visits from former patients, or from eminent professional men when passing through the town. His social spirit was undimned to the last, and when he became too deaf to mix in general conversation, or to relish mixed society, he loved to see his friends around him. His garden, which was very productive, almost replaced the old spot he had parted with, chiefly from the abundance it enabled him to furnish to other tables, as well as to his own; and the beauty of the flowers was enhanced to him by a thousand kindly associations. I think his image will not soon be effaced from the memory of those who used to see his benignant countenance and aspect of bright peace, as he sat

under his favourite trees, closing his book perhaps, to watch his grandchildren or great-grandchildren playing on the grass before him, or smiling and talking to himself, of which he had always the habit, while the scenes of three-quarters of a century were probably reviewed in his thoughts. But the summons to which he had long looked forward, at last approached. He had always expected that his death would be sudden, and evidently wished that it should be so; but it was otherwise ordained. In the course of the year 1830, he often mentioned to his medical friends the progress of a disease, the *scirrhus pylori*, of which we remained happily unconscious till near Christmas, when symptoms came on, which made it doubtful if even the extraordinary vigour of his constitution might resist for many days, or even many hours. Six weeks, however, passed before the close of his life. His illness excited a strong sensation in the town, and almost every friend at all within reach, came to visit him. This to most invalids would have been injurious, but to his social spirit it caused neither fatigue nor annoyance; he received all, conversing with bright cheerfulness almost to the last. Even when the dimned eye could no longer distinguish features, and the parched tongue refused its office, 'Let them come,' he feebly articulated, 'I can still,' the rest was expressed by a sign, 'return the grasp of a hand.' It would carry me far beyond my limits to dwell on the details of this solemn period, of which the holiness almost dispelled the gloom; suffice it to say that every hour was marked by some instance of affection, some trait of benevolence, of total forget-

fulness of self, of cheerful patience under suffering, and of meek trust in the God and Saviour whose service he had ever loved.

"My father's repeated injunctions that the last ceremonies should take place at an early hour, and in as private a manner as possible, precluded the use of several carriages that were offered for the occasion, but it would have been as presumptuous as ungracious on the part of his family to reject, had they been disposed to do so, the gratifying tribute of regard paid in the attendance of his professional brethren. Nor can I leave unacknowledged here the affectionate feelings testified by many a tearful eye in the numerous train of humbler rank, chiefly in decent mourning, that presented itself at the gate of the cemetery.

"Here I was about to close this account, when I received a letter from my brother (Dr. John Ranicar Park), containing some particulars which it may be worth while to subjoin.

"The republication, he observes, of the *Excision of Carious Joints*, by Dr. Jaffray, of Glasgow, took place when I was in Edinburgh, about 1807, and it was mentioned with high encomiums by Dr. Barclay in his surgical lectures. Having recently seen Dr. Jaffray, he humorously described his (Dr. Jaffray's) surprise at finding my father so different a person from what so bold an operation would have led him to expect. 'Instead of a giant, with nerves of steel, and no more feeling than a butcher, to find a kind-hearted little man, who would not hurt a fly if he could help it.' My father's feeling for his patients was such, that he never got much sleep the night before he performed any formidable operation, and I have

known him sick almost to fainting at seeing one not skilfully performed by another, declaring that he would rather perform three than witness one." ("I well remember how often we have observed the absolute greenness of his complexion on these occasions, or while he had anxious cases in hand.")

"That the steadiness of his nerves was in no respect impaired by his sympathy, on even the most trying occasions, appears from his success in the most formidable and difficult of operations,—lithotomy. An eminent surgeon in London triumphantly declared that he did not lose above one patient out of seven; my father lost only one out of fifty, and that one died, not of the operation, but of typhus fever, caught before, as was distinctly proved on examination. This circumstance led to the erection of fever wards, connected with the Liverpool Infirmary, and the separation of surgical patients from those labouring under fever. (Great objections were afterwards made by the surgeons to the reception of fever patients within the walls of the Infirmary; and these wards were in consequence disused for that purpose.) His success in less formidable operations may in some measure appear from the following incident. He one day called my attention to the gait of a gentleman walking a few paces before us, and when I saw nothing particular in it, he bade me watch more closely. I did so, and thought he favoured the left foot a little. 'I should not wonder if he does,' said my father, 'for I cut off that foot about seven weeks ago.' His success in treating both medical and surgical cases so far exceeded any thing I had witnessed either in Edinburgh or London, that it

seemed almost magical. My father's opinion of cancer and its excision deserves to be recorded. He had no faith in the cure of the disease by an operation. He had so often seen the cancer begin in the other breast after one had been taken off, that he doubted if the apparent cures by operations were those of genuine cancer. He had met with no less than eight cases of cancerous breasts, condemned as incurable, except by operation, in London, Edinburgh, and Dublin; and having been patients of his own originally, they came back to him for that purpose. The whole eight recovered under palliative treatment without any amputation. These were called cancers: were they really so? Decidedly not, said my father, though pronounced so by high authorities. His practice seemed to me, in some cases, to be guided rather by instinct, if I may say so, than by rule, if indeed it were not against rule."

Such is the history of the late Mr. Park, abridged principally from his daughter's valuable communication. It would seem to be improper, by any additional remarks, to weaken the impression it is calculated to produce on every reflecting and feeling mind. It is a noble tribute of filial piety and affection to the memory of a beloved and honoured parent. Those who remember Mr. Park will at once recognise the fidelity with which she has portrayed the character of her father. In her account there is no exaggeration in one single point. But an addition must be made to it, and that addition shall be as brief as possible.

There was one trait in Mr. Park's character that

ought not to be omitted, and that was his highly honourable conduct towards all his professional brethren whom he met in practice. He was very far superior indeed to that meanness which, in the absence of his colleague, might have led him to injure or disparage the character of that colleague, or to lessen his influence in the mind of the patient. In this point of view no medical man was ever more respected in Liverpool. His name will ever stand honourably recorded in the annals of his profession as a bold, original, and successful practitioner.

JOHN RUTTER, M.D.
JAMES DAWSON.

Dum juga montis aper, fluvios dum piscis amabit
Dumque thymo pascentur apes, dum rore cicadæ,
Semper honos, nomenque tuum, laudesque manebunt.—VIRG.

The following was inserted in the *Liverpool Courier*, February 2nd, 1831, a few days after Mr. Park's decease:—"On Friday, the 28th ultimo, the remains of the late Henry Park, Esq., were interred in the cemetery of the mount. They were accompanied to the grave by a considerable number of medical gentlemen, who voluntarily paid this tribute of respect to his memory. Mr. Park was unquestionably one of the first surgeons of his time. His understanding was clear, acute, sagacious, penetrating; his judgment sound; his medical knowledge and experience were extensive, and his opinions and decisions always valuable. He had early acquired a high reputation for talent and sagacity; and he ably sustained it, undiminished to his last hour, through a life unusually protracted. Yet for that reputation he was indebted solely to his own merit;

for he courted no popularity; he paid no homage to rank or greatness; he employed no indirect means to advance his own interests. In his intercourse with his professional brethren, he was always kind and friendly; and, present or absent, they could at all times repose with the most perfect confidence in the integrity of his conduct. The death of such a man is a great public loss; but his example remains, and it will be respected and followed by all who know and feel that the only road to distinction and esteem, is that of strict moral rectitude. The writer of this was, in his early days, a pupil of the late Mr. Park; he has known the deceased now for nearly half a century, and he feels a melancholy pleasure in offering this sincere and unsolicited testimony to the superiority of his character."

J. R.

The following postscript is added to shew principally the results of one department of Mr. Park's practice. His practice of midwifery extended over a period of half a century: a valuable record of it was commenced by him in the year 1769, and was continued until the close of the year 1830. In this 'Book of Genesis,' as it was termed, he noted with his own hand four thousand deliveries, and the date of the birth, and the sex, and any difficulties which were found to attend the parturient process. On seven occasions only, throughout that extended period, comprehending very numerous engagements, had he recourse to the employment of instruments, and in that number must be included the casualties to which his consultation practice introduced him,

since on him, in that earlier period, when competent practitioners were scarce, the task of operating devolved. It may in this place be stated, without drawing or meaning any disparaging conclusion, that Mr. Park's reliance on the competency of the natural efforts, very rarely suffered any abatement. His forbearance was proverbial; his patience untiring; and it was only on the important condition of a well-ascertained insufficiency of the natural powers to accomplish the parturient act, with safety to the lives and structures implicated, that he departed from his rule of non-interference.

A few years ago I furnished the Grand Jury at Lancaster with information, in a condensed form, on some points about to be laid before them, in connection with an enquiry then pending, touching the death of a respectable female, within a week after her delivery, by means of instruments. The reports current at the time alluded to, imputed to the practitioners engaged:—1st. That the use of instruments was not required in that instance, since the labour was neither prolonged nor severe. 2nd. That in the manner of their application gross ignorance or incompetency had been displayed, since the maternal structures had suffered extreme injury, and grangrene of these structures, and eventually the death of the mother, had resulted. It was added that the bones of the infant's head bore indelible marks of the depressions left after the employment of the forceps. I looked over all the documentary evidence then within my reach, so as to obtain facts bearing on what I anticipated would be the main object of their inquiry, viz.:—"What is the average necessity for the use of

instruments in the practice of midwifery?" In answer to this enquiry, the sum and substance of the subjoined statement was orally given; and it is introduced here, in the hope that in abler hands the record may be rendered subservient to the production of a statistical account on a subject which seems at present to be beset with inextricable difficulties and discrepancies.

	Deliveries.		Total.
In Mr. Park's private practice	4000	3 crotchet cases..... 4 forceps cases.....	7
In the late Mr. Christian's private practice	2500	12 cases of instrumental deliveries	12
In the late Mr. Reay's private practice	3200	7 cases of forceps or crotchet	7
In my own practice	870	No case for instruments	
Ladies' Charity:* delivered at their own houses in a period of 20 years	30000	2 crotchet cases ..... 2 forceps cases	4
Workhouse Lying-in Wd.: in six years	300	6 cases requiring the use of forceps or crotchet	6

It may be mentioned in this place that Mr. Park, during several years, encouraged the wives of the labouring classes to bring their children to his house to receive the benefit of vaccination. Mr. Park in this instance reversed the order of things at a time of life when most men seek repose. He collected twice a week, within and without his dwelling,

* In the Ladies' Charity, midwives attend the patients at their homes, and the surgeon accoucheur is called only in cases of difficulty; but no *primi parœ* are received. This fact may explain the reason of the comparatively small number of cases in which instrumental aid was required. But in the Lying-in ward at the Parish Workhouse the sufferers were all *primi parœ;* and to their extremely destitute state when admitted, must be added the effects of moral depression. The period now alluded to, occurred fifteen years since. These facts may explain the necessity for instrumental aid, where cases of "impaction," and those of "arrest," would be comparatively so much more likely to be presented to the surgeon.

some fifty or sixty mothers, bearing in their arms and nursing their offspring, much to the disquiet of his household, and to the surprise of many of his private patients, whose entrance into the house was often rendered impracticable by the compact aggregation of mothers and their infants. After some persuasion Mr. Park consented to transfer all his right and title to this gratuitous practice to his successor, who has reverently carried forward Mr. Park's intentions to the present hour; and an institution thus formed by Mr. Park, and ever since superintended by his successor, and managed by competent vaccinators, is now placed amongst the recognised insitutions of Liverpool. A regular register has all along been kept: upwards of twenty thousand children have been vaccinated within the last twenty years. This institution is not a public charity, nor has ever been considered such. The mothers deposit a shilling on their first reception, when the name and residence are entered in the register, and the child is submitted to the operation. If the parent should return with the child at the time pointed out, the shilling is returned to her, and the character of the pustule noted, if not satisfactory. But if the parent should fail to return, the shilling is forfeited, and thus a fund is raised, which has hitherto defrayed the expense of hiring an apartment for the practice of gratuitous vaccination. But better times are in prospect for this object: an individual intends to erect a suitable building for the purpose; and the present intelligent vaccinators, Messrs. Ellison and Long, are determined to aid the undertaking.

Jan. 4, 1838. J. D.

ARTICLE XVI.

BIOGRAPHICAL MEMOIR

OF

THE LATE NATHAN DRAKE, M.D.,

OF HADLEIGH, SUFFOLK.

A good Medical Biography would assuredly constitute a work to which the members of the profession might refer with much and honest pride. It would exhibit a bright and long array of names, rendered remarkable by the genius or the attainments of those who bore them. In most cases we might expect that the record would be one of intellect and industry, devoted to pursuits exclusively professional; yet such a biography must contain the names of many entitled to respect and to admiration for ability and attainments displayed and acquired in other departments of knowledge. The examples are not infrequent of physicians who have arrived at distinction through their ardent application to collateral studies, or to sciences possessing only a very remote connection with that peculiarly their own. Nor have there been wanting instances of persons who have combined the study and practice of the healing art with a zealous cultivation of

elegant literature and learning. In the class of those men who have thus signalized themselves with credit, may be ranked the accomplished physician whose life forms the subject of the following biographical sketch. His contributions to science were indeed but few, and consequently his eminence as a writer rests almost entirely on his purely literary productions. Medical men, however, will naturally desire to learn something about the history of any distinguished member of their fraternity, although that member may have been more extensively known as an author than in his professional capacity. It is therefore believed that to the readers of this volume, a brief memoir will not be unacceptable of the life of *one* who gained for himself an honourable name in the world of literature, and practised with reputation as a physician for nearly half a century.

The late Nathan Drake, of Hadleigh, in the county of Suffolk, was born at York, on the 15th of January, 1766. The family of the Drakes is one of considerable standing in Yorkshire. Watson's *History and Antiquities of Halifax,* contains a long account of their pedigree, commencing in the reign of Edward the First, from which it appears that in early times they were settled in the neighbourhood of that town. The grandfather of the subject of this memoir was the Rev. Samuel Drake, a Minor Canon of Lincoln Cathedral. The father and the grandfather of that gentleman were also clergymen of the Church of England, the former having been Vicar of Nottingham, and the latter Rector of Hansworth and Vicar of Pontefract. This last-

mentioned divine, the Rev. Samuel Drake, D.D., wrote the life of his tutor and friend, Mr. Cleveland. Nathan Drake, of York, the father of the physician, was the second son of the Minor Canon of Lincoln. He chose the profession of an artist, a choice which, I have understood, was made in opposition to the wishes of his family. He had a strong inclination to follow this line of life, for which his genius was fortunately not unsuited. His talents as a painter were considerable, and he acquired no little credit by his productions. He married, in 1763, Mary, daughter of a Mr. Thomas Carr, of York. By this lady he had four children,—Nathan, the future physician and author,—Richard, who also embraced the medical profession,—and two daughters. He died in 1778.

Nathan, the eldest son, though not the eldest child, at an early age showed himself to be endowed with more than common ability. The striking and philosophical observation that "the child is the father of the man," was exemplified in the history of his mind; for the love of elegant literature which characterised him in after life, he imbibed and cherished in early boyhood. Of his character and habits in that long bye-gone time, a very pleasing account is given me by a gentleman who was his contemporary at school, and has favoured me with his recollections on the subject. "Dr. N. Drake," states my informant,* "was placed in the year 1774, at the same time with the writer of this brief notice, and his brother, Richard Drake, afterwards a surgeon in York, under the tuition of the

* George Brown, Esq., of York.

Rev. John Bell, Rector of St. Crux, the master of, at that time, the first classical school in York, where his talents and attainments soon raised him to the highest form, and his taste for poetry early distinguished him among his youthful competitors in those exercises wherein the scholars were required to translate passages from Greek and Latin poets into English metre. He was regular and diligent in his application to his studies, which were not confined to school-hours and the dead languages, but extended to continental literature. He was amiable in his disposition, and kind in his deportment, so as to secure the affectionate friendship of all those he thought worthy of it, and of which the writer, though now a septuagenarian, retains many agreeable recollections."

The medical education of Dr. Drake commenced in the year 1779. At the age of thirteen he was apprenticed to Mr. Francis Bacon, a respectable general practitioner in the city of York. I know that Dr. Drake greatly regretted the interruption of his general education, which was occasioned by this early initiation into the mechanical department of medicine. No one, he thought, should be "articled" before the completion of his sixteenth or seventeenth year; and all the benefit to be derived from an apprenticeship might, he considered, be obtained in a period far shorter than that of five years. But notions of a different nature directed his proceedings at the time of which I am now speaking, and after having for five years dispensed in the surgery of Mr. Bacon, he was induced to devote two more to the compounding of medicine

in the capacity of assistant to Messrs. Walker and Yonge, of St. James's Street, apothecaries to the Prince of Wales. He went to London in 1784, and the time which he passed there was, in his opinion, very unprofitably spent.

In 1786 he entered upon his academical career. In the autumn of this year he repaired to that favourite and far-famed seat of medicine, Edinburgh. For some time after his going thither, it was undecided whether he should adopt the line of a general practitioner, or qualify himself for exercising the functions of a physician. It was not until the year 1788, that he determined upon practising in the latter department of the profession. In the previous year he had been admitted a member of the Royal Medical Society; and had also taken an interest in the formation of another society, called the Lyceum Medicum. At least I may presume this to have been the case, from the circumstance of my having found among his papers a manuscript entitled, "An Address to the Members of the Lyceum on the First Night of its Institution." This address contains a brief view of the principal literary and scientific societies established in Europe. A more elaborate performance is an essay, read either to the Lyceum, or to the Royal Medical Society, on the following question, "What are the doctrines which have tended to retard or accelerate the progress of the medical art?" A very interesting sketch is presented in this essay, of the most important of the theories and of the modes of practice which are recorded in the annals of medicine. The enquiry commences with the era of Hippocrates, and is brought down to the

period at which it was undertaken. Considerable time and attention appear to have been devoted to the composition of this essay. In the autumn of 1789, Dr. Drake received his diploma. His inaugural thesis was a treatise "*De Somno.*" The Latinity of this treatise is so respectable, that one or two of his relatives, who knew that his opportunities of acquiring a good Latin style had been but few, conjectured that the composition could not have been his own. He is, however, as justly entitled to the credit of whatever merits the piece may possess, as he is responsible for all its defects.

It may be supposed that the time which he passed at Edinburgh glided away happily. Some of the University's most distinguished members then adorned its professional chairs; and no doubt the young student enjoyed the collision of intellect, and the stimulus to mental exertion, afforded by the emulation and converse of his fellow pupils. It is seldom that the scenes in which we have passed the years of opening manhood are not peculiarly grateful to memory; and there is reason to believe that those in which his student days were spent, held a bright place in the recollections of the physician. Dr. Drake loved to recall to mind the scenes and incidents of early life. Edinburgh of course frequently presented itself to his retrospections, and when he spoke of that city, it was with pleasure and admiration. One summer, during his term of academic attendance, he made an excursion through the Western Highlands. His love for the beauties of nature was ardent, and, as might therefore be expected, he was highly gratified by the wild and

striking scenery which the tour offered to his view. He left Scotland shortly after he had taken his degree, and to that country he never returned; but often, no doubt, in after years he revisited, in imagination, its picturesque capital and romantic Highlands, admired and loved in the enthusiastic season of youth. Amongst the associates and friends of those happy days at Edinburgh, was one connected with him, not only by the ties of personal regard, but also by the bonds of a literary coalition. It was in conjunction with the late Dr. Edward Ash, that he made his first appearance in the world of letters. *The Speculator*, a work published in numbers, after the fashion of the periodical papers then so much in vogue, was begun in the year 1789; but the publication did not commence until the early part of the following spring. The work was favourably received, and was reprinted in Dublin. Those numbers which proceeded from the pen of Dr. Drake, were afterwards included by him in his *Literary Hours*. His coadjutor, Dr. Ash, was a man of considerable talents and accomplishments. He subsequently settled in London, where he practised as a physician. He died not many years ago.

Very soon after Dr. Drake had quitted the University, he began to look about for some situation in which he might enter upon the practice of his profession. The local connections and knowledge of his younger brother, Richard, proved the means of bringing him into the south-eastern part of the country. Mr. Richard Drake had been apprenticed to a medical gentleman at Colchester, of the name of Newell. He afterwards passed a season at

Edinburgh, and subsequently went through a course of hospital attendance in London. This mention of his brother leads me to devote a few more lines to the memory of a gentleman who was in every way deserving of such a token of respect. Although unknown in the world of authorship, Mr. Richard Drake was a man of high talent and extensive information. I have been much gratified by some of the letters which he addressed, when very young, to his brother Nathan. They evince an admirable tone of feeling in reference to the acquisition of general and professional knowledge, along with a most affectionate regard for the welfare and reputation of his brother. Dr. Drake had hardly entered upon his course of academic attendance, when, in a letter dated November 13, 1786, the Colchester apprentice thus writes to the Edinburgh student:—"Let no consideration whatever prevent you from acquiring real and useful knowledge, such as will enable you to appear with lustre among men of science and learning, and pass through the duties of your profession with honour and success; a medical man ought seldom to meet his superior in science, and should not be inferior to many in learning." It is surely creditable to him to have formed so high an estimate of the acquirements which a medical man should possess; and surely, too, the wish is not irrational, that all who are seeking to qualify themselves for the practice of the profession, would deem it incumbent on them to endeavour not to fall greatly short of the standard which Mr. Drake was desirous should be reached by his brother and himself. In addition to the various intellectual

gifts and attainments which, from the preceding quotation of his sentiments, we might readily conceive Mr. Drake to have possessed, endowed with many amiable qualities of the heart, he was highly respected in his native city, where he practised in the general department of the profession with great and deserved reputation. He died at York in the year 1826.

In consequence of information furnished by his brother, Dr. Drake was induced to try his fortune in the little town of Billericay, in Essex, where it was thought there existed an advantageous opening for a physician. Thither he went in the early part of 1790, but not meeting with the expected success, he removed to Sudbury, in Suffolk, in the autumn of the same year. His residence in the latter place did not extend to a longer period than a year and a half; but it is memorable in his biography, as having been the occasion of his acquaintance with a person who proved to be through after-life a sincere and valued friend—with an individual most richly endowed, indeed, with the gifts of intellectual power and activity—with the late Dr. Mason Good. This gentleman was practising as a surgeon and apothecary at Sudbury during the period of Dr. Drake's sojourn there. Their tastes and pursuits were congenial: they soon felt a strong regard for one another; and while they were fellow-townsmen, their intimacy was so great, that few days passed away of which some portion was not spent in each other's society. The separation, which ensued on the removal of the friends to different situations, interrupted their personal inter-

course, but their friendship was terminated only by that event which closed the useful and distinguished career of Dr. Good. They seem to have entertained the highest opinion of each other's character, as to the attributes of both head and heart. The writer of this memoir has enjoyed the opportunity of reading the letters which Dr. Drake received from his friend, during a period of more than thirty years, and he can truly say that he has been deeply interested in their perusal. Many of them are most beautiful; they breathe the spirit of the purest friendship, and testify strongly to the moral and intellectual worth both of him who wrote, and of him who received them. It is, indeed, delightful to reflect on the interchange of thought and feeling that existed between these two friends. A friendship such as this, endearing to one another men so amiable and so accomplished, must surely possess a moral beauty in the estimation of all who can be gratified by the evidence of kindly sympathy, correct sentiment, and refined taste.

In the spring of 1792, Dr. Drake removed to Hadleigh, in Suffolk, in consequence of a negociation which he had concluded with Dr. Gibbons, a physician then practising in that town. In Hadleigh, Dr. Drake passed the remainder of a life which was protracted to that term which the Psalmist has allotted to human existence. There, for the long period of four and forty years, he practised as a physician, and there he wrote those many literary works, which attest the variety and extent of his knowledge, and the elegance and correctness of his taste. The lives of authors, it has often been

remarked, afford for the most part but few materials for the biographer to record, and the observation may perhaps be extended, with some degree of justice, to the generality of the lives of medical men. Tied down to place more than the members of any other liberal profession, they seldom wander out of the diminutive orbit in which they regularly move. The life of Dr. Drake did not form an exception to this rule. He rarely absented himself from the scene of his professional exertions; and his days were devoted to the study and practice of the healing art, and to the occupations of the literary student.

The attention of Dr. Drake was early drawn to the nature and treatment of pulmonary disorders. He was induced to try the effects of the "digitalis" in some cases of phthisis; and the result of the experiment was such as to lead him to lay it before the public. His essays on the subject, the first of which appeared in the year 1799, attracted considerable notice, and were in a great degree the occasion of that more extended trial which ensued of the remedial powers of the digitalis, when administered to consumptive patients. So instrumental, indeed, was he in giving credit to this exhibition of that powerful medicine, that, in a letter from a brother physician, the writer,* after requesting him to

* The late Dr. Henry Reeve, of Norwich, author of a treatise "On the Torpidity of Animals,"—a justly valued friend, of whose mental powers and acquirements Dr. Drake was accustomed to speak in terms of very high respect. By the premature death of this gentleman, which occurred in 1814, the medical profession was deprived of one of the most accomplished (and, doubtless, had life been spared, it might have been added, one of the most distinguished) men who have ever adorned it by their talents.

contribute an article to the *Edinburgh Medical Journal,* observes to his friend, *I look upon the subject of digitalis to belong to you.* The medicine was employed in numerous cases; in some, with decided benefit; in others, with little or no benefit to the patient. Dr. Drake, however, deserved the thanks of the profession for his share in bringing into repute a medicine which promised to be of signal service in the treatment of a peculiarly fatal and melancholy disease; but it is believed that subsequent experience has not confirmed the high opinion which was once reasonably entertained of the efficacy of the digitalis as a remedy for consumption.

In addition to the Essays on Digitalis, Dr. Drake contributed to a Medical Journal, a report of a very interesting case that had fallen under his care. I am not aware that he published any thing else of a professional character, with the exception of his thesis. The following is a list of these papers, with the names and dates of the periodicals in which they appeared:—

I.—"Observations on the Use of the Digitalis in Pulmonary Consumption, with two cases iu which it proved permanently successful;" published in Dr. Beddoes' *Contributions to Medical and Physical Knowledge,* 1799, and noticed in *The Medical and Physical Journal,* May, 1799, p. 290.

The other papers on the Digitalis appeared in *The Medical and Physical Journal,* London, as follows:—

II.—Vol. II., October, 1799.

III.—Vol. II., December, 1799.

IV.—Vol. III., April, 1800.

V.—Vol. IV., December, 1800.

VI.—"The History of a Case of Diseased Spleen, with the Appearances on Dissection. *The Edinburgh Medical and Surgical Journal.* October, 1806.

In 1807, Dr. Drake formed a happy matrimonial connexion. The object of his choice was Ursula, daughter of the late Mr. William Rose, of Brettenham, Suffolk. This lady and three children affectionately cherish the memory of a husband and a parent, who, eminently fitted to adorn and to enjoy domestic life, proved as eminently a source of pride and comfort to his family Of the two sons, the elder is a clergyman of the Church of England, and the younger follows the profession of his father.

Towards the end of the year 1813, Dr. Drake was attacked by an illness of a very alarming character, from which he did not entirely recover until after the lapse of many years. The affection was one of the heart, and, like most diseases of that organ, of an obscure nature. I have reason to suppose that some allusion to his case is contained in *The Study of Medicine* of his friend Dr. Good. At the request of that gentleman, he drew up a statement on the subject, which, however, in consequence of its length, and the pressure of other matter claiming admission, could not be inserted in the above mentioned work. Among the papers which he left behind him, one was found, which I believe to be a copy of the document in question. As a history drawn up by a medical man of his own case, and that case a somewhat remarkable one, it is presumed that the insertion of the account in this memoir will not be ill-placed.

Case.—Nathan Drake, M.D., aged 48, of regular and temperate habits, but who had been subject for some years to frequent returns of cardialgia and flatulency, though in every other respect in apparent good health, was, about the close of December, 1813, seized, without any assignable cause, with considerable pain and sense of heat about the region of the heart, extending towards the sternum, and affecting likewise the inner part of the left arm, especially near the insertion of the pectoral muscle. No difficulty of breathing or tendency to syncope was present, but great languor and sense of anxiety were felt. Pulse slower than usual, but regular and somewhat full. As the bowels had been for some days rather restricted, a dose of rhubarb and calomel was taken, and an anodyne embrocation was repeatedly and assiduously used. The pain, however, continued constant and unabated in intensity, and on the third day from the attack, ushered in a considerable irregularity in the circulation, the pulse intermitting every fourth stroke, and accompanied each time with a painful and thrilling sensation. On the night of this day, when just dropping into sleep, he was suddenly attacked with a violent spasm of the heart, accompanied by the most hurried and irregular action of that organ, and with a prostration of strength so great as to deprive him for a short time of the power of speech. As soon, however, as he was able to direct, he ordered ten ounces of blood to be taken from the arm, and a large blister to be applied to the region of the heart. Relief was experienced even while the blood was flowing, which exhibited, however,

no indications of inflammatory action, nor any other morbid appearance than that the serum was tinged of so deep a yellow, as to give a vivid dye to a piece of linen immersed in it. As no other symptom of hepatic derangement, however, was present, this change of colour was attributed to the diseased action of the heart, a phenomenon which has been remarked as no very uncommon result either of organic or functional disorder of that viscus. The spasm recurring precisely at the same period on the two succeeding nights, was again removed by a second and third bleeding, and another blister was applied over the sternum. By these means the pain was abated, nor did the spasm recur again with any violence; but the circulation remained very irregular, not from palpitation, but solely from intermission, which was, at the same time, still painful and thrilling. The debility also, though not experienced in so great a degree, was yet such as to prevent his leaving his bedchamber. It was at this period, Jan. 2nd, 1814, that Sir Lachlan Maclean was called in, who recommended the mercurial pill with aloes, aloetic pill, and a mixture composed of camphor mixture, æther, and the addition of a drachm and a half of subcarbonate of soda; and a few days subsequently a mixture with myrrh and nitric acid. The intermission, however, continuing unabated, he (Dr. Drake) determined to have recourse to the stronger antispasmodics, and tried, but without much benefit, large doses of valerian and assafœtida. Opiates were found occasionally necessary to procure sleep, and a growing pain of the heart being constantly present, guiacum and Dover's Powder,

with calomel, were exhibited with some advantage. The stimulus of blisters, likewise, having been hitherto always productive of relief, ten were, in succession, during the course of the next eight weeks, applied over the chest and the region of the heart. More than four months had by this time elapsed from the attack, and though the pain was of a milder description, yet was it in some degree constantly present. The intermission was still every fourth or fifth stroke, but not painful, and sufficient strength had been acquired to enable him to ride out daily, for a few miles, on horseback.

It was now, with a view to the intermission, which he considered as depending on debility of the muscular fibre of the heart, originating, perhaps, from sympathy with a morbid state of the stomach, that he commenced a tonic plan, taking a scruple of the subcarbonate of iron thrice a day, and relieving pain by the use of the tincture of hyoscyamus, taken both during the day and at night. In six weeks from the commencement of this plan, the intermission ceased for a week, and then recurred, nor did the continuance of the medicine, though in still larger doses, arrest it. He now, therefore, dropped the iron, and began the cinchona cordifolia in doses of a drachm, at first twice, and then thrice a day. In a week after this change of plan, the pulse again became regular, and continued so while taking the bark. The intermission returned, however, on leaving it off, but was subsequently removed on every resumption of the same medicine, in about three or four days after recommencing it. In this manner

did he persist, for nearly five years, in taking the bark, for three or four weeks at a time, and then intermitting it for a fortnight, and sometimes longer, and constantly using the tincture hyoscyami at night, in drachm doses. During this long period, though never entirely free from pain of the heart, either night or day, yet did the symptoms gradually give way, and for the last two years the pain has seldom recurred, and the pulse, with few exceptions, and those evidently occasioned by cold or indigestion, has been regular.

In about six months after the attack, which was as soon, indeed, as his strength permitted, he substituted exercise on foot for that which he had previously taken on horseback, finding it in every respect more useful. He generally walked from three to four miles every day, experiencing great relief from pain whenever slight perspiration was excited. In the autumn, also, of 1814, in order to assist the effect of the tonic plan, he went to Harwich, and after using the tepid bath for a short time, he ventured into the open sea, and bathed every other morning, for about five weeks, and with decided advantage. It should be observed, that great care was taken, during the whole course of the illness, to keep the bowels in a gently open state, and this chiefly through the medium of small and repeated doses of calomel, and that a diet strictly antacid and of easy digestion was in no instance deviated from. It may be necessary also to add, that the appetite, which was at first greatly impaired, is now perfectly good, that the digestive

powers have recovered their tone, and that the strength and vigour of the constitution have been completely recovered.

The preceding history of his case was, I conjecture, drawn up by Dr. Drake in 1820 or 1821. Although his illness was of so formidable a character, and so protracted in its duration, that for several years he was never entirely free from uneasiness, and was subject to frequent and very painful aggravations of the symptoms of his disorder, yet was he only a short time incapacitated from attending to the duties of his profession; and during this long period of sickness and suffering, he executed no inconsiderable portion of a most elaborate literary undertaking, in which he had previously been engaged for two or three years. Both himself and his family were accustomed to consider that his health had been materially impaired by the thought and the labour which he bestowed upon the biography of our great dramatic poet. Those bodily energies, however, which had well nigh been exhausted by disease and too great mental toil, were destined to be restored to nearly all their former vigour. For many years subsequent to his recovery, he was blessed with the enjoyment of excellent health, and enabled to pursue with comfort his customary professional and literary avocations. His noon of life had now been long gone by, and the evening of his days was fast advancing; but that evening closed around an age that, to use the beautiful expression of the great moralist, "melted with unperceived decay." Few, probably, of those who saw Dr. Drake at this period, and were not

informed on the subject, would have imagined him to be so old as he really was. The firm step, the speaking eye, the animated manner, would have led most beholders to conclude that he was yet far from having almost run out the term of three score years and ten. At a still later period, however, those around him could perceive that some of the infirmities of age were gradually stealing over him. Dr. Drake was remarkably fond of walking, and accustomed to take a good deal of exercise. The slow and shortened walk was to his family a sure token of his failing strength. For the last few months of his life his rest at night had been more than usually broken, and for the last few weeks previous to his becoming dangerously ill, his health had been manifestly indifferent; still, notwithstanding this circumstance, neither himself (so far as can be ascertained,) nor his family suspected the existence of any formidable disorder. It was not, indeed, until the 19th of April, 1836, that the serious apprehensions of the latter were excited. On that day the symptoms of his complaint put on an evidently alarming character. His medical friends, William Mudd and John Grouse, Esqrs., of Hadleigh, were called in; and by them he was constantly visited until death closed his earthly course. The kindness and the attention of these gentlemen were every thing that the family of Dr. Drake could desire; and I know that they highly appreciate the friendly interest and professional skill which were exerted and evinced in behalf of their beloved and lamented relative. In the opinion of Mr. Mudd and Mr. Grouse the case was one of

bronchitis, complicated with functional disorder of the liver, and followed by gradual exhaustion of the vital energies. Dr. Drake was also once seen by Dr. Baird, an eminent physician at Ipswich, who concurs in the opinion just given. After a lingering decay, which lasted seven weeks, nature gave way; Dr. Drake departed this life on the 7th of June, 1836, in his seventy-first year. During his illness he experienced some very distressing sensations, though he suffered no violent pain. The closing scene, however, was one of undisturbed repose; all uneasiness was past, and the dying man lay for some hours in calm unconsciousness of the outward world. The cessation of the breathing was the only sign which marked the awful moment when "the silver cord of life was loosed," and "the spirit returned unto Him who gave it." Never was a human soul more placidly and gently released from its earthly tabernacle. On the 15th of June the last sad office was performed for the dead; and seldom has the grave received the mortal part of one more respected and esteemed in life by all who knew him, than was the kind-hearted thoughtful man whose body was on that day committed to the ground.

It is now my duty to present to the reader some observations on the professional and literary character of the subject of this memoir. The following remarks on his medical qualifications proceed from the pen of a gentleman whose own merit, as a practitioner, has been very long and extensively recognized—of one of the oldest and most esteemed physicians in the eastern counties of England. It

is to the kindness of Sir Lachlan Maclean, of Sudbury, that I am indebted for the annexed communication, of which the opening sentence will sufficiently explain why I have delegated to another the work of estimating the professional attainments of Dr. Drake.

"A very interesting Biographical Memoir has been handed to me of the late Dr. Drake, accompanied with a wish that I would express my opinion, in a brief manner, of his 'medical character,' the author of that document not being a member of the profession. The confidence thus reposed in me is deeply felt and duly appreciated; yet I would willingly have shrunk from the delicate task, conscious as I am of my inability to do adequate justice to the merits of my deceased friend. Presuming, however, that this call has been made upon me in consequence of our long, and I may say intimate acquaintance, and of my having had more frequent opportunities of professional intercourse with him than fell to the lot of any other physician, I do not feel myself at liberty to decline it, while I gladly avail myself of the injunction imposed upon me of compressing this sketch within as narrow limits as possible.

"In the estimate which his biographer has formed of his literary merits and attainments, that gentleman has rendered him no more than strict justice; and as regards his medical acquirements, it is most gratifying to me to add my humble but sincere tribute of admiration and respect. Indeed, those who are best acquainted with his contributions and communications on medical subjects, cannot but wish that

he had written more, since it may truly be said of him, that in whatever department of his profession his pen was engaged, he evinced a thorough knowledge of it. But his sphere of action and his opportunities in a country town, were too limited to furnish sufficient materials. Had it been his lot to be attached to an hospital or similar public institution, his active and intelligent mind and ready pen would have had more ample scope, and there is little doubt that his contributions on subjects more immediately connected with medicine would have been far more numerous, though it is probable that some of his beautiful literary productions would have been lost to the world.

"In his conduct to his medical brethren he was scrupulously correct and honourable, far above those disingenuous arts too often employed to obtain practice by supplanting a rival; and in no instance did he fail to uphold the character and dignity of the profession of which he was '*Decus et honos*.'

"In the notice which occurs in the foregoing pages of the excellent inaugural dissertation, *De Somno*, it is mentioned that the goodness of its Latinity led some of Dr. Drake's friends to question his claim to its authorship. 'He is, however,' his biographer has added, 'justly entitled to the credit of whatever merits the piece may possess.' Any additional statement on the subject will probably be deemed superfluous, yet the writer of this slight notice may be permitted to express his full assurance that the composition of the treatise in question was entirely the work of Dr. Drake. In this thesis he has evinced great discrimination and judgment in

selecting from the best authors, and arranging in a regular and connected form every thing that is curious and interesting on the subject of sleep—its causes, remote and proximate—and its effects on man and animals. Had it occurred to him, subsequently, to publish a translation of this thesis, with such further observations as his experience might have furnished, there is little doubt but that it would have been well received. I have in my possession most of the theses of Dr. Drake's fellow-graduates of the same year, and I can justly say that his is superior to the greater number, and equal to the best, or *primus inter pares,* for that period was distinguished by some young men of high talents, who were his associates and intimates.

"In concluding this brief and imperfect sketch, I may, without impropriety, apply to its subject, with only a trifling alteration of the words in italics, the eulogium which was passed by the learned Dr. King on the no less learned Dr. Arbuthnot, 'Medicus ille *dignissimus, spectatissimus,* humanissimus.'

L. M."

Of the literary works of Dr. Drake any detailed account would of course be unsuited to these pages. I shall therefore confine myself, on the present occasion, to giving a correct list of these publications, and shall conclude this memoir with a few remarks on the literary and personal character of the deceased.

I.—The Speculator, a periodical paper, written in conjunction with Dr. Edward Ash, 8vo. London, 1790.

II.—Poems, 4to. London, 1793.

III.—Literary Hours. First edition, 1 vol., royal 8vo. London, 1798.—Fourth edition, 3 vols., post 8vo., 1820.

IV.—Essays illustrative of the Tattler, Speculator, and Guardian, 3 vols., post 8vo. London, 1805.—Second edition, 1812.

V.—Essays illustrative of the Rambler, Adventurer, Idler, and other Periodical Papers, to the year 1809, 2 vols., post 8vo. London, 1809.

VI.—The Gleaner, a Series of Periodical Essays selected from Authors not included in the British Essayists, 4 vols., 8vo. London, 1811.

VII.—Shakspeare and his Times, 2 vols., 4to. London, 1817.

VIII.—Winter Nights, 2 vols., post 8vo. London, 1820.

IX.—Evenings in Autumn, 2 vols., post 8vo. London, 1822.

X.—Noontide Leisure, 2 vols., post 8vo. London, 1824.

XI.—Mornings in Spring, 2 vols., post 8vo. London, 1828.

XII.—Memorials of Shakspeare, or Sketches of his Character and Genius by various Writers, now first collected, with Essays and Notes by the Editor, 8vo. London, 1828.

XIII.—The Harp of Judah, or Songs of Sion, being a Metrical Translation of the Psalms, constructed from the most beautiful parts of the best English Versions, with an Introduction and Notes, critical and explanatory, including the choicest Paraphrases, Imitations, and Poetical Illustrations of the Psalms, 2 vols., post 8vo. London, 1837. (A posthumous work.)

Those who are acquainted with the works enumerated above, are not only capable of judging of the author's talents and attainments, but are qualified also to form, in many respects, no very erroneous estimate of his general character. They will at once impute to him a familiarity with the productions of classic antiquity, and an accurate and most extensive acquaintance with the literature of his native

country; they will further suppose him to have possessed no inconsiderable knowledge of many of the finest writers of Italy and France; and would, indeed, and with justice, assign to him an amount and a variety of literary information, that prove him to have been a diligent and successful student in his maturer years. Taken from school at the age of thirteen, and employed for a long subsequent period in the not very intellectual occupations of an apothecary's dispensary, we cannot but consider the circumstances of his situation in early life as unfavourable to the prosecution of other than professional studies. *Dr. Drake was, in fact, as a scholar, mainly a self-educated man.* When we bear in mind this circumstance, and take into account also the demands on his time and labour, made by the profession which he followed, we cannot resist the conclusion that the stores of literary knowledge which he accumulated, could have been amassed only by a person gifted with a more than common aptitude for acquiring, and animated by a no less unusual industry in searching after knowledge.

Amongst the mental qualities with which Dr. Drake was endowed, that of *taste* appears to me to stand forth with remarkable prominence. This faculty was in him exquisite and correct. It manifested itself in his admiration of the beautiful and the noble, whether the object that arrested his attention belonged to the world of nature or to that of art. His love of romantic scenery, as has been before observed, was ardent, and a perhaps yet warmer sentiment of affection inspired him in rela-

tion to the attractive in art, and more especially in literature: his taste, moreover, was correct as well as refined. Rarely, if ever, did he view with satisfaction aught that was unworthy of being so regarded, and seldom did he fail to be favourably impressed by any object that deserved to command approbation.

The readers of Dr. Drake's works can scarcely avoid being struck with the kindly spirit which pervades his numerous criticisms. This spirit is characteristic of the author, and is a most honourable characteristic indeed. No ill-natured sarcastic criticism ever proceeded from the pen so often employed in passing judgment upon the productions of others. He loved to show forth the beauties of a writer far better than to hold up his blemishes to ridicule, though the latter by no means escaped his observation. He delighted also in noticing with favour the works of authors but little known to the world, or of fresh candidates for fame. Occasionally, perhaps, this kindness of heart may have led him to speak with rather more favour, or with rather less asperity, than stern strict justice might have spoken; but what generous mind can fail to admire that critical spirit which, if ever unduly biassed, was biassed by a feeling of forbearance? The possession of such a spirit is alone an indication of talent, for it often requires less discrimination to detect and to expose the faults, than is needed to discover and to recommend the merits of a piece. The amiable disposition of Dr. Drake was further evinced in his private communications with literary men. Not unfrequently were manuscripts transmitted to him accompanied by a request of his

opinion, and, in various cases, of his revision. It sometimes occurred that the season when it was proposed to lay the burthen of these critical labours upon him was one at which he could ill spare a single hour from his own proper avocations; yet it is believed that the request was rarely refused, and in not a single instance rudely rejected.

An acquaintance with the writings of Dr. Drake would naturally beget the supposition that they emanated from a mind peculiarly susceptible of social affections and sympathies, and imbued with a fervent love of those quiet yet profound delights which gladden domestic life; and such a supposition is amply verified by the reality of the case. Some allusion has already been made to this touching characteristic of the man, and it may now be added that few persons have ever been blessed with the possession of tastes and habits of a more thoroughly domestic cast. *Home* was to him the scene of his most dearly cherished enjoyments, and the idea of it came attended to his mind by a thousand delightful associations. He thought with fond affection of the home of his childhood, and in that which he made for himself in after years, all his kindly feelings expanded with delight. Life could offer to him few higher gratifications than those which he experienced in the society of his own family circle, assembled round their cheerful winter fire. Some very pleasing sketches and illustrations of home feelings and enjoyments are contained in his works; and their readers may be assured that they constitute a faithful transcript of what their author felt and enjoyed. When he

wrote on subjects such as these, he wrote out of the fulness of his heart—a beautiful feature in his character. To the prevalence of those home feelings which glowed so brightly in the bosom of Dr. Drake, England is not a little indebted for the moral greatness of her children. It remains for me briefly to advert to the moral and religious character of Dr. Drake. In these respects also the *author* is no unfaithful representative of the *man*. Not only are his writings unstained by anything offensive; they are entitled also to the positive merit of being enriched with many trains of thought subservient to the interests of piety and virtue. To these interests Dr. Drake was a decided practical friend; a reverence for morality pervaded his whole conduct, and exerted a salutary influence over his literary partialities and aversions. The elegance of his taste has already been commented on; its moral purity demands now to be noticed. Nothing that sinned against moral propriety was acceptable to him, however strongly in other respects it might have claims upon his admiration. As an instance of this correct and healthy feeling, the writer may adduce the purport of some conversations which he well remembers to have enjoyed with the subject of this memoir on the merits of Lord Byron's poetry. Dr. Drake did not fail to appreciate the brilliant genius of the noble bard, but he contended that the gross immorality which occasionally, and the want of a generous sympathy with his fellow-creatures which so often disfigures some of his finest effusions, detracted materially from that pleasure which less exceptionable and equally beautiful poetry would

afford to any right-minded reader. He further expressed his conviction that the licentiousness and impiety of those celebrated compositions would ultimately be fatal to their popularity.

The kindly and benevolent spirit which distinguished Dr. Drake in relation to every other subject, characterized him also in his religious sentiments. He thought with charity of those among his Christian brethren who adopted modes of faith and worship different from his own, which were those of the Established Church of his country. Of that church he was an attached and zealous member; and on its services and ministrations he constantly attended. Nor was he a less regular observer of the daily duties of private and family devotion. His love of learning did not lead him to neglect the Volume of Inspiration for the study of merely human knowledge; and it may be stated here, that his acquaintance with theological literature was by no means inconsiderable. The charge of irreligion has sometimes been brought against medical men, but that charge receives no confirmation whatever from the character of Dr. Drake. His life was a beautiful illustration of a better and a wiser spirit; and he has left to his profession an instructive example—the example of ONE who, to the credit of being an able physician and an elegant writer, joined a praise which is far more precious than all the renown of science, and all the fame of authorship, the praise of being a strictly moral and conscientious man, and a sincere and humble Christian.

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Welsh, E. A. K., Esq., Surgeon, Downton.

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Welton, William, Esq., Surgeon, Woodbridge, Suffolk.
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Westall, Edward, Esq., Surgeon, Croydon.
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Wightman, Charles, M.D., Newcastle.
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Wilkin, Henry, Esq., Surgeon, Walton, Suffolk.
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Williams, James, Esq., Surgeon, Martin, near Worcester.
Williams, John, Esq., Surgeon, Bewdley.
Williams, Owen, W., Esq., Surgeon, Leamington.
Williams, Wm. Esq., Surgeon, South Brent, Somersetshire.
Williams, David, M.D., Physician to the North Dispensary, Liverpool.
Williams, Peter, Esq., Holywell; Surgeon to the Flintshire General Dispensary.
Williams, Richard Lloyd, Esq., Surgeon to the Denbighshire

General Dispensary and Asylum for the Recovery of Health.

Williams, John Calthorp, M.D , Lecturer on Medicine in the Medical School, Nottingham.

Williams, Richard, M.D., Aberystwith.

Williams, John, Esq., Surgeon, Dursley, Gloucestershire.

Williams, Charles, J. B., M.D., F.R.S., Member of the Royal College of Physicians, London.

Williams, Edward, Esq., Surgeon, Bala, Merionethshire.

Williams, James Braham, Esq., Surgeon, Pwllheli, Carnarvonshire.

Williamson, Jas., M.D., Physician to the the Infirmary, Leeds.

Wilmot, William Byam, M.D., Stroud, Physician to the Hampton Dispensary.

Wilson, John Grant, Esq., Surgeon to the General Hospital, Bristol,

Wilson, James W., Esq., Surgeon to the Manchester Royal Infirmary.

Wilson, George, Esq., Surgeon, Monmouth.

Wilton, J. W., Esq., Senior Surgeon to the Gloucester Infirmary.

Windsor, John, Esq., F.L.S., Surgeon to the Manchester Eye Institution, and Lecturer on Medical Jurisprudence.

Wing, H., Esq., Surgeon, Bury St. Edmund's, Suffolk.

Wingfield, Charles, Esq., Surgeon to the Oxford Infirmary.

Winter, William, Esq., Surgeon, Bristol.

Winzar, John, Esq., Salisbury.

Wolstenholme, Samuel, Esq., Surgeon to the Holywell Dispensary, Flintshire.

Wolstenholme, George, Esq., Surgeon, Bolton, Lancashire.

Wood, George Leighton, Esq., Surgeon to the Bath Hospital.

Wood, Miles Astman, Esq , Surgeon to the Dispensary, Ledbury.

Wood, Abraham, Esq., Surgeon, Rochdale.

Wood, Charles, Esq., Surgeon, Leicester.

Wood, Richard, Esq., Surgeon to the Birmingham General Hospital.

Wood, Peter, M.D., Physician to the Manchester Royal Infirmary, Dispensary, Fever Wards, and Lunatic Asylum.
Wood, R., Esq., Surgeon, Rochdale.
Wood, Samuel, Esq., House Surgeon to the Salop Infirmary.
Woodcock, John, Esq., Surgeon, Bury, Lancashire.
Woodhouse, Richard, M.D., Reading.
Woodman. James, M.D., Bath.
Woods, Henry, Esq., Surgeon, Bath.
Woodward, William, Esq., Surgeon, Pershore.
Woodward, John, Esq., Surgeon, Worcester.
Woolfenden, James Mills, Esq., Surgeon, Warwick.
Workman, Maurice, Esq., Surgeon, Reading.
Workman, Thomas Skeate, Esq., Surgeon, Reading.
Workman, Thomas, Esq., Surgeon, Basingstoke.
Worthingten, W., Esq , Surgeon to the Lowestoff Dispensary, Suffolk.
Wright Warner, M.D., Physician to the Norfolk and Norwich Hospital, the Norwich Bethel, and the Norfolk County Lunatic Asylum.
Wright, Edward W., M.D., Shipston-on-Stour.
Wynne, Rice, Esq., Surgeon, the College, Shrewsbury.
Wynter, Thomas, Esq., Surgeon, Westbromwich.

Y.

Yardley, William, Esq., Surgeon, Shiffnal, Salop.
Yeatman, J. C., Esq., Surgeon, Froome, Somersetshire.
Young, James, Esq., Surgeon, Wells, Norfolk.
Young, Robert, Esq., Surgeon, Pedwell.
Young, Samuel, Esq., Surgeon, Reading.

As it is scarcely possible to avoid errors in printing so numerous a list of Members, the Secretaries are anxious, wherever they are committed, that they may be amended; and will, therefore, feel obliged, if those Members, whose names are not rightly inserted, or whose Christian names are omitted, will send a notification to them, free of postage.

APPENDIX.

THE FOLLOWING NAMES ARRIVED TOO LATE FOR INSERTION IN THEIR PROPER PLACES.

Carmicheal, Richard, M.R.I.A., Surgeon to the Richmond Hospital, &c. &c.

Hensman, Thomas, Esq., Surgeon, Liverpool.

Jacob, Arthur, M.D., Professor of Anatomy, Royal College of Surgeons in Ireland, Ely Place, Dublin.

Maunsell, Henry, M.D., Professor of Midwifery in the Royal College of Surgeons in Ireland, Molesworth Street, Dublin.

THE FOLLOWING NAMES SHOULD HAVE BEEN ADDED TO THE LIVERPOOL COUNCIL.

James Carson, M.D., F.R.S., Liverpool.

William Reynolds, M.D., Lecturer on Chemistry, Liverpool.

John M. Banner, Esq., Surgeon to the Northern Hospital, and Lecturer on Surgery, Liverpool.

ALTERATION.

Braithwaite, Francis, Esq., Surgeon to the Hereford Infirmary, instead of Surgeon to the Hereford Dispensary.

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NOTICES.

All Papers, and other Communications, to be addressed to the Secretaries, Dr. Hastings or J. P. Sheppard, Esq., Worcester, and forwarded carriage free.

Those Members who have not an opportunity of paying their Subscription to a Member of the Council resident in their district, are requested to pay it through the medium of their own Bankers, to Messrs. Robarts and Co. London, for Messrs. Berwick and Co., Worcester, on account of the "Provincial Medical and Surgical Association;" or they may remit the amount through the Post-office to either of the Secretaries.

Gentlemen wishing to join the Association, are respectfully requested to apply to some Member of the Council in their immediate district; or to Dr. Hastings, or J. P. Sheppard, Esq. the Secretaries, Worcester.

THACKERAY PRIZE.

The Council of the Association announce that the Thackeray Prize of Fifty Pounds will be awarded to the Author of the best Essay, having for its object –

"The investigation of the sources of the common Continued Fevers of Great Britain and Ireland, and the ascertaining of the circumstances which favour the diffusion of these diseases; and also those circumstances which may have a tendency to render them communicable from one person to another."

The Prize to be open to the competition of the Members of every accredited School for Medicine and Surgery in the United Kingdom, and the Essays to be sent to the Secretaries of the Association, on or before the 1st January, 1840.

Each Essay to have a motto affixed, and to be accompanied with a sealed note, containing the name and residence of the Author, and the motto to be written on the outside of the note.

CHARLES HASTINGS, M.D., } Secretaries to
J. P. SHEPPARD, Surgeon, } the Association.

Worcester, December 12, 1837.

THE FOLLOWING ARE

THE PRINCIPAL OBJECTS

TO WHICH THE ATTENTION OF THE

PROVINCIAL

MEDICAL AND SURGICAL ASSOCIATION

IS DIRECTED.

1st.—Collection of useful information, whether speculative or practical, through Original Essays, or Reports of Provincial Hospitals, Infirmaries, or Dispensaries, or of private practice.

2nd.—Increase of knowledge of the medical topography of England, through statistical, meteorological, geological, and botanical inquiries.

3rd.—Investigations of the modifications of endemic and epidemic diseases, in different situations, and at various periods, so as to trace, so far as the present imperfect state of the art will permit, their connexions with peculiarities of soil or climate, or with the localities, habits, and occupations of the people.

4th.—Advancement of medico-legal science, through succinct Reports of whatever cases may occur in Provincial Courts of Judicature.

5th.—Maintenance of the honour and respectability of the profession, generally, in the provinces, by promoting friendly intercourse and free communication of its Members; and by establishing among them the harmony and good feeling which ought ever to characterise a liberal profession.

THE LAWS

OF THE

PROVINCIAL MEDICAL AND SURGICAL ASSOCIATION.

1st.—That a Provincial Medical and Surgical Association be formed.

2nd.—That the Association be managed by a President, two Secretaries, and a Council.

3rd.—That the several Officers be appointed annually, by a General Meeting of Members convened for that purpose, at whichever of the principal towns may be appointed; the place of such Meeting being prospectively notified each year.

4th.—That at this Meeting shall be presented a Report, prepared by the Secretaries, of the general state of the Association, its proceedings, and pecuniary accounts; the Report to be afterwards printed, and a copy supplied to every Member.

5th.—That at this Meeting one of the Members shall be appointed to give, at the next Annual Meeting, an account of the state or progress of Medical Science during the last year, or an Oration on some subject connected with Medical Science, or a Biographical Memoir of some eminent cultivator of Medical Science, who may have resided in the Provinces.

PRESIDENT.

6th.—That the office of President be honorary, and conferred on some senior Physician or Surgeon of eminence, resident in any of the provincial towns comprised in the circle of the Association.

SECRETARIES.

7th.—That the two Secretaries be resident in Worcester, the place of publication, their duties being to attend to the printing of the *Transactions*, and to correct the press; to be present at the meetings of the Council, and to keep the minutes thereof; to correspond with the Members of the Association; to receive and submit to the Council all papers transmitted for publication; and to keep the financial accounts of the Association.

COUNCIL.

8th.—That the Council consist of —— Members, to be selected from the principal provincial towns. The Council, with whom must rest the chief responsibility of publication, to have full power of deciding on all papers transmitted, and the consent of three of its Members must be obtained before any paper can be published. It shall also be the duty of the Council to receive the subscriptions, when due, in their respective districts. Each Member of the Association to pay one guinea admission, and the same amount, annually, afterwards; the subscription to commence from the 1st of January each year, and to be considered as due, unless notice of its being withdrawn be given to one of the Secretaries antecedently to the year for which it would be payable; for such subscription each Member shall receive a copy of each part of the *Transactions* published. Each volume to contain a list of all the Members.

REGULATIONS OF THE DISTRICT BRANCHES.

9th.—That Members of the Association be at liberty to form District Branches wherever it may suit their convenience.

10th.—That in order to facilitate the formation of such Branches, and maintain uniformity amongst them, the General Council provide suitable instructions for the guidance of those who may unite in instituting them.

11th.—That conformity with these instructions be further ensured, by the initiating proceedings and organization of each Branch being submitted to the General Council, for their revision and approval.

12th.—That the District Branches be free to govern themselves as their respective Members may think fit; but that the by-laws ordaining the special government, be submitted to the General Council previously to their taking effect, in order to guard against the possibility of any such by-laws contravening the fundamental laws of the Association.

13th.—That all Members appointed to offices by the District Branches, be forthwith enrolled as Members of the General Council, on the appointments being officially notified to the General Council, it being highly expedient that all who engage in the executive management of the District Branches, should be also Members of the General Council.

14th.—That the expenses incurred by the District Secretaries in conducting the proceedings of the District Branches be defrayed from the general fund, provided such expenses do not, in any instance, exceed one-seventh part of the guinea subscribed by each Member enrolled in the District Branch.

15th.—That if any circumstance arise in the formation of District Branches, which calls for a larger expenditure than what is allowed by the foregoing resolution, such expenses, provided they do not exceed one-fourth of the guinea, may be allowed, by a statement of the circumstances being made known to the General Council.

ELECTION OF MEMBERS, ANNUAL MEETINGS, &c.

16th.—That each Member, on applying for admission, be nominated by two Members, as a pledge of eligibility.

17th.—That at each Annual Meeting, the place of meeting for the ensuing year shall be announced.

18th.—That any Member wishing to propose a new law, or an alteration in an existing law, must send notice of his intention to one of the Secretaries three months previous to the Anniversary Meeting, which will be circulated with the Report of the Council.

19th.—That the Association appoint Honorary Members at the Anniversary Meetings only.

20th.—That the Association appoint Members in foreign countries to be styled "Honorary Corresponding Members," from whom communications, respecting the state of medicine in those countries, is expected to be received.

21st.—That a Medical Benevolent Society, under the restrictions proposed in the Report of the Committee presented to the Anniversary Meeting at Oxford, be connected with the Association.

22nd.—That all Papers, and other Communications, be addressed to the Secretaries, Dr. Hastings or Mr. Sheppard, Worcester, and forwarded carriage free.

PAYMENT OF SUBSCRIPTIONS, &c.

23rd.—That those Members who have not an opportunity of paying their subscriptions to a Member of the Council resident in their district, are requested to pay it through the medium of their own Bankers, to Messrs. Robarts and Co. London, for Messrs. Berwick & Co. Worcester, on account of the "Provincial Medical and Surgical Association."

24th.—That Messrs. Berwick & Co. Old Bank, Worcester, be the Treasurers of the Association.

The following are the Contents of the six Volumes which have been already published by the Association:

CONTENTS OF VOLUME I.

PART I.—ESSAYS AND CASES.

ARTICLE.

I.—An Address delivered at the First Meeting of the Association. By *Charles Hastings, M.D.* Physician to the Worcester Infirmary.

II.—On the Objects and Modes of Medical Investigation. By *Edward Barlow, M.D.* Physician to the Bath United Hospital, &c.

III.—Theory of the Frontal Sinus. By *E. Milligan, M.D. F.S.A.*

IV.—A Case of Imperforate Hymen. By *James Milman Coley, Esq.* Bridgnorth.

V.—Some Observations on the Peculiarities of Diseases in Infants and Children. By *J. K. Walker, M.D.* Physician to the Huddersfield Infirmary.

VI.—Upon the Reciprocal Influence of the Mind and Body of Man, in Health and Disease. By *Jonas Malden, M.D.* Senior Physician to the Worcester Infirmary.

VII.—Cases illustrative of Diseases of the Heart. By *Thomas Jeffreys, M.D.* Liverpool.

VIII.—Some Observations on the Value of the different Signs which distinguish the Sac in Strangulated Hernia, with some Practical Remarks on the Operation, and Cases in illustration. By *J. H. James, Esq.* Surgeon to the Devon and Exeter Hospital.

IX.—Case of Hydrocephalus. By *Thomas Stewart Traill, M.D.* late of Liverpool, now Professor of Medical Jurisprudence in the University of Edinburgh.

X.—A Proposal to establish County Natural History Societies, for ascertaining the Circumstances in all Localities which are productive of Disease or conducive to Health. By *J. Conolly, M.D.* Warwick; late Professor of the Practice of Medicine in the London University.

XI.—History of a Case of what has been commonly called Spina Bifida, occurring in an Adult. By *James Dawson, Esq.* Surgeon to the Liverpool Infirmary and General Hospital.

XII.—Case of Melanosis. By *David Williams, M.D.* Physician to the Liverpool North Dispensary. *(With a Portrait.)*

XIII.—Some Observations on the Necessity, Utility, and the Precursory Symptoms of Sleep. By *Roger Wakefield Scott, M.D.* Physician to the South Dispensary, Liverpool.

XIV.—Case of Aneurism of the Basilar Artery, suddenly giving way and occasioning death by pressure on the Medulla Oblongata. By *Egerton A. Jennings, Esq. F.L.S.* Surgeon to the Leamington Charitable Bathing Institution, &c. *(With a coloured Engraving.)*

XV.—On fixing the Scapula in Dislocations of the Humerus. By *Jonathan Toogood, Esq.* Senior Surgeon to the Bridgewater Infirmary.

XVI.—A Case of Osteo-Sarcoma. By *William Hetling, Esq.* Surgeon to the Bristol Infirmary *(With an Engraving.)*

PART II.—REPORTS OF INFIRMARIES AND DISPENSARIES.

ARTICLE.

XVII.—Report of the Birmingham Infirmary for Diseases of the Eye, from March 1 to December 31, 1832. By *Mr. Middlemore*, Assistant-Surgeon to the Eye Infirmary, &c.

XVIII.—A Report of the Out-Cases attended by *Mr. Parsons*, at the Birmingham Infirmary, from January 1 to December 31, 1832.

XIX.—A Report of the State of Disease in the City of Worcester during the year 1832. By *Robert I. N. Streeten, M.D.* Physician to the Worcester Dispensary.

PART III.—MEDICAL JURISPRUDENCE.

XX.—A Case of suspected Poisoning by Cantharides, with an Account of the Inquest before the Coroner. By *Charles Hastings, M.D.* Physician to the Worcester Infirmary.

PART IV.—BIOGRAPHY.

XXI.—Biographical Memoir of the late Dr. Thackeray, of Bedford.

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PART I.

I.—An Address delivered at the First Anniversary of the Association. By *Edward Barlow, M.D.* Physician to the Bath United Hospital, &c.

PART II.—MEDICAL TOPOGRAPHY.

II.—Sketches of the Medical Topography of the Hundred of Penwith, comprising the district of the Landsend, Cornwall. By *John Forbes, M.D. F.R.S.* Physician to the Chichester Infirmary, &c. *(With a Map.)*

III.—Medical Topography of Bristol. By *Andrew Carrick, M.D.* Senior Physician to the Bristol Infirmary; and *John Addington Symonds, M.D.* Physician to the Bristol General Hospital, and Lecturer on Forensic Medicine.

IV.—Topographical Account of Stourport, Worcestershire, and its immediate Neighbourhood. By *Kenrick Watson, Esq.* Surgeon.

PART III.—ESSAYS AND CASES.

V.—Additional Facts and Observations on the efficacy of Strychnia in some forms of Paralysis. By *James Lomax Bardsley, M.D.* Physician to the Manchester Royal Infirmary, &c.

VI.—Observations on the Treatment of Syphilis without Mercury. By *Thomas Green, M.D.* Bristol.

VII.—Observations on Chronic Peritoneal Inflammation and its Treatment, with Cases. By *Edward Thompson, Esq.* Whitehaven, Member of the Royal College of Surgeons.

ARTICLE.

VIII.—History of a Case of Lithotomy by the Rectum. By *James Dawson, Esq.* Surgeon to the Liverpool Infirmary.

IX.—Case of Hydrophobia. By *Ralph Barnes Grindrod, Esq.* Surgeon, Manchester. *(With a Plate.)*

X.—On the Variations in the Production of Certain Diseases not usually supposed subject to Epidemic Influence. By *J. Brown, M.D.* Physician to the Sunderland and Bishopwearmouth Infirmary.

XI.—A Case of Tuberculous Affection of the Right Kidney, with extensive disease of the Spinal Column, preceded by the expulsion of a Biliary Concretion. By *John Pritchard, Esq.* Surgeon, Leamington.

XII.—A Case of Uterine Hydatids. By *William Daniel Watson, Esq.* Surgeon, Warwick. *(With a Plate.)*

XIII.—Singular Case of a Foreign Body found in the Heart of a Boy. By *Thomas Davis, Esq.* Surgeon, Upton-upon-Severn. *(With a Plate.)*

XIV.—On Dislocation of the Shoulder. By *W. F. Morgan, Esq.* late House-Surgeon to the Bristol Infirmary.

XV.—A Description of the Anatomical Structure of the Liver of a Rat, from Cuba. By *Henry Riley, M.D.* Senior Physician to St. Peter's Hospital, Bristol. *(With a Plate.)*

XVI.—Observations upon Cholera, as it appeared in Wolverhampton and its Neighbourhood, in August, September, and October, 1832. By *T. Ogier Ward, M.B.* Physician to the Dispensaries of Wolverhampton and Lichfield.

XVII.—Some Observations on the Peculiarities of the Diseases of Infants and Children. By *J. K. Walker, M.D.* Senior Physician to the Huddersfield Infirmary.

XVIII.—Some Observations on the Influence of Sleep on the Vital Functions. By *Roger Wakefield Scott, M.D.* Physician to the Liverpool South Dispensary.

PART IV.—MEDICAL JURISPRUDENCE.

XIX.—An Attempt to ascertain, by experiment, the exact difference between the changes produced in the Lungs of still-born Children, by their artificial inflation, and those produced in the Lungs of new-born Children, by natural respiration. By *Egerton A. Jennings, Esq. F.L.S.* Surgeon to the Leamington Charitable Bathing Institution.

PART V.—REPORTS OF INFIRMARIES.

XX.—Report of the Birmingham Infirmary for Diseases of the Eye, from January 1 to December 31, 1833. By *Richard Middlemore, Esq.* Assistant Surgeon to the Eye Infirmary, &c.

XXI.—A Report of the Out-Cases attended by *George Parsons, Esq.* at the Birmingham Infirmary, from January 1 to December 31, 1833.

PART VI.—BIOGRAPHY.

XXII.—Biographical Memoir of the late Dr. John Darwall, of Birmingham. By *John Conolly M.D.* of Warwick.

CONTENTS OF VOLUME III.

PART I.

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I.—An Address delivered at the Second Anniversary of the Association. By *John Conolly, M.D.* late Professor of Medicine in the London University.

PART II.—REPORTS.

II.—A Report on the Chemistry of the Blood, as illustrative of Pathology. By *Egerton A. Jennings, Esq. F.L.S.* Surgeon to the Leamington Charitable Institution.

III.—A Report on the present State of our Knowledge of Anatomy. By *Thomas Turner, Esq. M.R.C.S.* Lecturer on Anatomy and Physiology ; Surgeon to the Manchester Royal Infirmary, &c. &c. &c.

PART III.—ESSAYS AND CASES.

IV.—Remarks upon the Progress and Causes of Cholera, as it occurred in Bristol, in 1832. By *John Addington Symonds, M.D.* Honorary Secretary to the Bristol Board of Health ; Physician to the Bristol General Hospital, and to the Bristol Dispensary.

V.—An Account of Scarlatina, as it appeared in the Town and Neighbourhood of Beaconsfield, in Buckinghamshire, in the autumn of 1832. By *Nathaniel Rumsey, Esq.* Member of the College of Surgeons of London, and Surgeon at Beaconsfield.

VI.—Observations on some of the Causes which influence good or bad Stumps, in certain Cases of Amputation of the Thigh. By *J. H. James, Esq.* Surgeon to the Devon and Exeter Hospital.

VII.—A Case of Extra-uterine Fœtation with Remarks. By *Congreve Selwyn, Esq.* Surgeon to the Ledbury Dispensary. *(With a Plate.)*

VIII.—Observations on Pterygium. By *Richard Middlemore, Esq.* one of the Medical Officers of the Birmingham Eye Infirmary ; Lecturer on Diseases of the Eye, &c.

IX.—Some Observations on the Peculiarities of the Diseases of Infants and Children. By *J. K. Walker, M.D.* Senior Physician to the Huddersfield Infirmary. (Continued from vol. ii. p. 422.)

X.—An Essay on Puerperal Convulsions. By *J. T. Ingleby, Esq.* Member of the Royal College of Surgeons, and Lecturer on Midwifery at the Birmingham School of Medicine.

XI.—Pathological Remarks on some of the Diseases of the Brain, particularly in reference to the uncertainty of Diagnosis. By *Thomas Jeffreys, M.D.* Liverpool.

XII.—A Case of Extreme Enlargement of the Articular Epiphyses of the larger Joints, from Rickets. By *Thomas Brayne, Esq.* Surgeon, Banbury. *(With a Plate.)*

PART IV.—REPORTS OF INFIRMARIES.

XIII.—Report of the Birmingham Infirmary for Diseases of the Eye. By *R. Middlemore, Esq.* one of the Medical Officers of the Birmingham Eye Infirmary ; Lecturer on Diseases of the Eye, &c.

ARTICLE.

XIV.—Report of the Out-Cases attended by *George Parsons, Esq.* at the Birmingham Infirmary, from January 1 to December 31, 1834.

XV.—Report of the Out-Cases attended by *Frederick Ryland, Esq.* at the Birmingham Infirmary, between the 25th December, 1833, and the 25th December, 1834.

PART. V.—BIOGRAPHY.

XVI.—A Biographical Sketch of the Life of the late Dr. Robert Jackson, Inspector of Hospitals. By *Thomas Barnes, M.D. F.R.S.E.* Physician to the Carlisle Dispensary and Fever Hospital.

PART VI.—MEDICAL JURISPRUDENCE.

XVII.—Some Remarks on the Bristol Case of Poisoning, and on Disinterment for Forensic Purposes. By *J. A. Symonds, M.D.* Physician to the Bristol Hospital, and Lecturer on Medical Jurisprudence.

CONTENTS OF VOLUME IV.

PART I.

I.—An Address delivered at the Third Anniversary of the Association. By *J. C. Prichard, M.D. F.R.S.* Corresponding Member of the Institute of France, Member of the Royal Academy of Medicine of Paris, and Senior Physician to the Bristol Infirmary.

PART II.—FOREIGN CORRESPONDENCE.

II.—An Account of the Autumnal Fevers, Epidemic Scarlatina, and Small Pox, which prevailed at Amsterdam, during the year 1834. By *C. I. Nieuwenhuys, M.D.* Honorary Corresponding Member for Holland.

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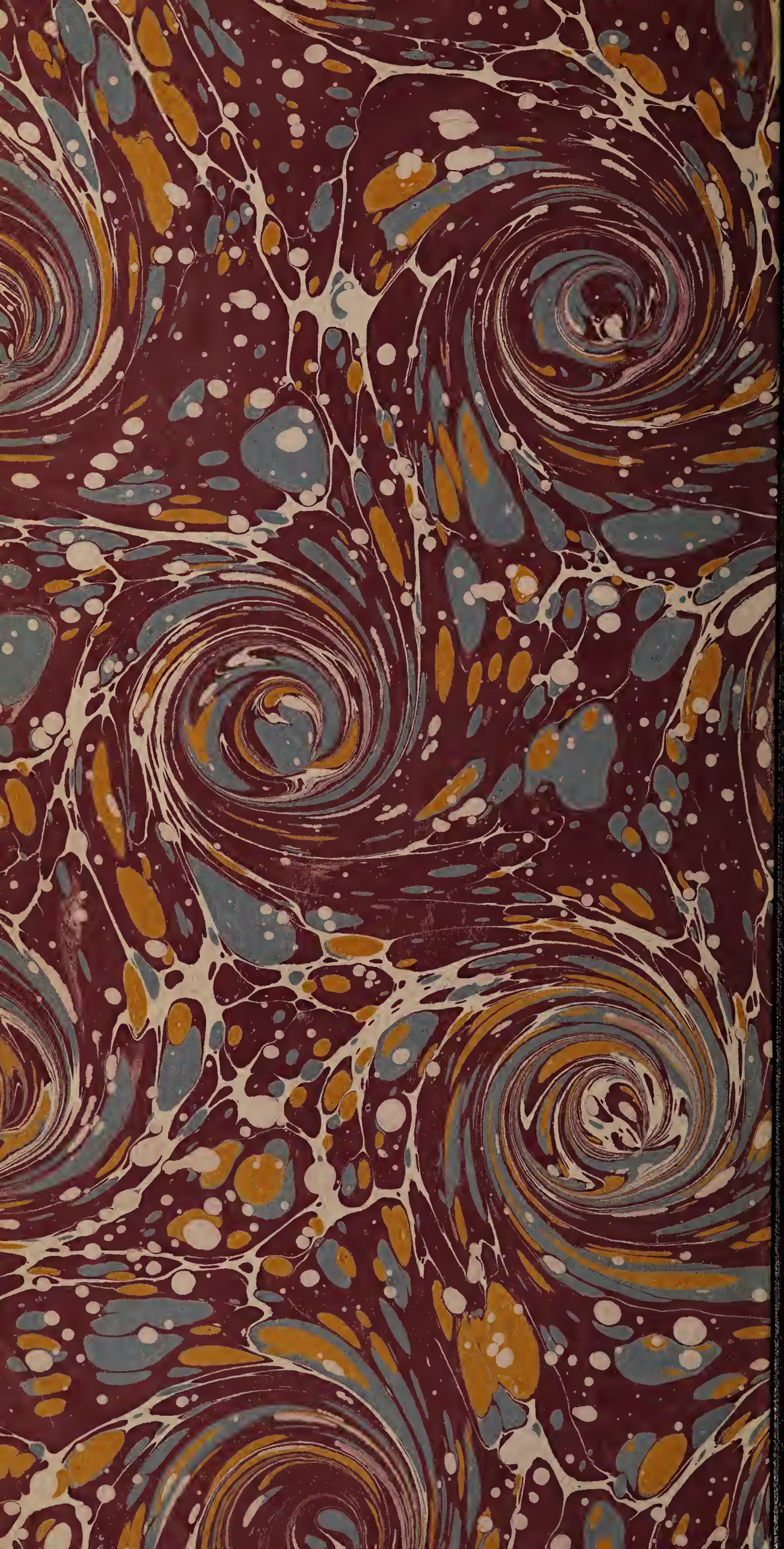
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